

**PLANNING COMMISSION
Meeting Agenda (Revised)
Monday – February 24, 2014
7:00 PM**

City Council Chambers – 155 NW 2nd Avenue

Commissioner Tyler Smith (Chair)

**Commissioner John Proctor
Commissioner John Savory
Commissioner (Vacant)**

**Commissioner Shawn Hensley
Commissioner John Serlet
Commissioner (Vacant)**

- 1. CALL TO ORDER**
- 2. PUBLIC HEARING**
 - a. *Approval of a 10.3 acre subdivision for 33 single family home lots. This is the second phase of the four phase development of the Northwoods Estates subdivision. (SUB 13-01)*
- 3. NEW BUSINESS**
 - a. *Approval of a one-year extension of the Development Agreement for the Northwoods Master Plan*
- 4. CITIZEN INPUT ON NON-AGENDA ITEMS**
- 5. FINAL DECISIONS None**
- 6. MINUTES**
- 7. ITEMS OF INTEREST/REPORT FROM STAFF**
 - a. *Next Regularly Scheduled Planning Commission – March 10, 2014*
- 8. ITEMS OF INTEREST/GUIDANCE FROM PLANNING COMMISSION**
- 9. ADJOURNMENT**

The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for person with disabilities should be made at least 48 hours before the meeting at 503-266-7001.

*A copy of this agenda can be found on the City's web page at www.ci.canby.or.us
City Council and Planning Commission Meetings are broadcast live and can be viewed on OCTS Channel 5.
For a schedule of the playback times, please call 503-263-6287.*

PUBLIC HEARING FORMAT

The public hearing will be conducted as follows:

- **STAFF REPORT**
- **QUESTIONS** (If any, by the Planning Commission or staff)
- **OPEN PUBLIC HEARING FOR TESTIMONY:**
 - APPLICANT** (Not more than 15 minutes)
 - PROponents** (Persons in favor of application) (Not more than 5 minutes per person)
 - OPponents** (Persons opposed to application) (Not more than 5 minutes per person)
 - NEUTRAL** (Persons with no opinion) (Not more than 5 minutes per person)
 - REBUTTAL** (By applicant, not more than 10 minutes)
- **CLOSE PUBLIC HEARING** (No further public testimony allowed)
- **QUESTIONS** (If any by the Planning Commission)
- **DISCUSSION** (By the Planning Commission)
- **DECISION** (By the Planning Commission)

All interested persons in attendance shall be heard on the matter. If you wish to testify on this matter, please step forward when the Chair calls for Proponents if you favor the application; or Opponents if you are opposed to the application; to the microphone, state your name address, and interest in the matter. You will also need to sign the Testimony sheet at the microphone with your name and address. You may be limited by time for your statement, depending upon how many people wish to testify.

EVERYONE PRESENT IS ENCOURAGED TO TESTIFY, EVEN IF IT IS ONLY TO CONCUR WITH PREVIOUS TESTIMONY. All questions must be directed through the Chair. Any evidence to be considered must be submitted to the hearing body for public access.

Testimony and evidence must be directed toward the applicable criteria listed on the wall.

Failure to raise an issue accompanied by statements or evidence sufficient to afford the decision-maker and interested parties an opportunity to respond to the issue, may preclude appeal to the City Council and the Land Use Board of Appeals based on that issue.

Failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the local government to respond to the issue may preclude an action for damages in circuit court.

Before the conclusion of the initial evidentiary hearing, any participant may ask the hearings body for an opportunity to present additional relevant evidence or testimony that is within the scope of the hearing. The Planning Commission shall grant such requests by continuing the public hearing or leaving the record open for additional written evidence or testimony. Any such continuance or extension shall be subject to the limitations of the 120-day rule, unless the continuance or extension is requested or agreed to by the applicant.

If additional documents or evidence are provided by any party, the Planning Commission may, if requested, allow a continuance or leave the record open to allow the parties a reasonable opportunity to respond. Any such continuance or extension of the record requested by an applicant shall result in a corresponding extension of the 120-day time period.



City of Canby

SUBDIVISION STAFF REPORT

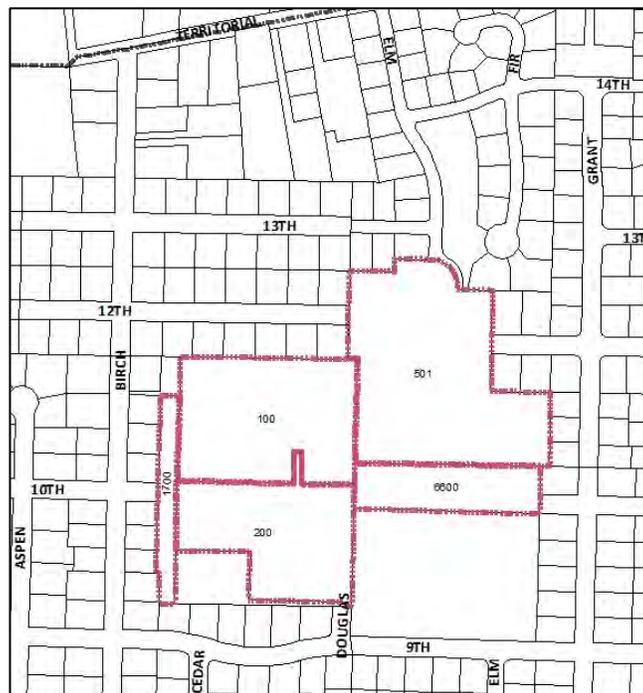
FILE #: SUB 13-01

Prepared for the February 24, 2014 Planning Commission Meeting

LOCATION: NW 10th Ave. from Grant to Birch; N. Elm from NW 10th to NW 13th

ZONING: R-1 Low-Density Residential

TAX LOTS: 31E32AD01700, 31E32AD00100, 31E32AD00200, 31E33BB00501, & 31E33BC06600
(Bordered properties in map below)



LOT SIZE: 10.3 acre site

OWNERS: Northwoods Investments, Richard Kadwell, & David Kadwell

APPLICANT: Northwoods Investments/Ron Tatone

APPLICATION TYPE: Subdivision (Type III)

CITY FILE NUMBER: SUB 13-01

I. **PROJECT OVERVIEW & EXISTING CONDITIONS**

The applicant is requesting approval of a 10.3 acre subdivision for 33 single family home lots. This is the second phase of the four phase development of the Northwoods Estates subdivision. The latest extension of the approved SUB 05-12, Master Plan, and Development Agreement is included in the Planning Commission packet.

In addition, staff has included a copy of the Final Findings and Order for SUB 05-12 and SUB 05-12 Modification decisions. Staff had some difficulty in determining what the Master Plan document is because the Development Agreement refers to the "Master Plan Map" by reference but it does not specify what this map is any further. Staff determined that the "Northwoods Estates, Canby OR Conceptual Development Plan" dated December 29, 2005 is the "Master Plan" because it is the most overall conceptual plan submitted with the applicant's SUB 05-12 application and because it was the map referenced in extension requests for the Planning Commission's approval of SUB 05-12.

The applicant's narrative states the following, see 16.08.150 for staff's discussion on SDC credits, 16.64.070(D) for staff's discussion on the proposed stormwater system, and 16.64.070 (A) & (B) and 16.120 for staff's discussion on the proposed park:

"The Northwood Estates subdivision was approved by the City of Canby under SUB 05-12 on March 29, 2006, and was constructed in 2007. As a component of the original subdivision application a Master Plan for the entire 31.57 -acre, four-phase development was approved by the Planning Commission with conditions of approval documented in a Development Agreement executed on January 11, 2007, and recorded under fee number 2007-007387 Clackamas County Deed Records. Modification 06-08, and Modification 07-02 secured approval of minor construction revisions to the conditions of approval.

Sanitary Sewer: The plan extends the existing 8" mainline at the southern terminus of N. Elm Street to provide gravity service to this phase of the development. All pipelines will be 8" diameter.

Water System: All waterlines will be extended to complete looping on all abutting streets. Fire hydrants will be placed in accordance with direction from the Fire Department. All domestic waterlines will be a minimum of 8" diameter. The irrigation system to the park will be provided by a service line from the northern park area, which was extended during the first phase of construction. This system is piped separately from the domestic water system and controlled by the City Park's staff.

Street Network: The Master Plan is to extend N Elm Street to provide a primary north-south local street connection between NW 10th Avenue and Territorial Road, and to construct NW 10th Avenue to provide a continuous east west Neighborhood Route. NW 10th Avenue is classified as a Neighborhood Route in the TSP and is proposed to be 40-foot wide paved surface in an ultimate 60 foot right-of-way to match the existing improvements, as opposed to a 36' street as published in the TSP for a neighborhood route. This project includes full width improvements on NW 10th Avenue, although, SDC credits will be requested for the oversizing beyond a 36' street section, and for the half street improvements abutting the adjacent developed property of St. Patrick's Church. The internal streets will vary from the 20-foot wide one-way travel lanes along the park on the N Elm Street Boulevard, to 28-foot local streets in a 40-foot right -of-way on NW 11th and NW 12th Avenues. No parking is proposed along the park frontage roads and all abutting residential properties will have garage access form the side streets, not from N Elm Street, eliminating driveways along the park frontage.

Storm Drainage: All storm water will be collected and disposed of on-site, incorporating best management practices, dry wells, and infiltration systems. All storm drainage systems have

been approved as rule authorized by DEQ in a letter dated February 16, 2007, which was provided to the City to fulfill the master planning requirements of the initial phase of construction.

Parks & Recreation: The Master Plan for the four-phase development proposed approximately three acres to be set aside to provide park and open space. As part of the first phase of Northwood Estates, approximately two thirds of this area was dedicated to the City of Canby in 2007, extending from NW 14th Ave to the south end of the first phase of development. Phase II will dedicate the remaining area identified in the Master Plan for the park. The City has agreed, as documented in the Development Agreement, to provide a credit for the park land dedication and waive all Parks and Recreation SDC's for all phases of this development. This current phase of the park consists of a narrow linear strip between the boulevard lanes of N Elm Street approximately 600 feet from the current terminus of Phase I, south to NW 10th Avenue. The boulevard park area will include curbs, sidewalks or walkways, grass surfacing, street trees, irrigation, and lighting, which will be detailed in a subsequent design document for the Parks Department review and approval.

Electric, Gas, Cable, Phone: All utilities will be provided as required by the utility providers. The overhead electrical wire along NW 10th Street will remain overhead, but all other utilities will be relocated underground."

II. ATTACHMENTS

- A.** Application form
- B.** Application narrative
- C.** Applicant correspondence letters
- D.** Traffic Study Memorandum from DKS, the city's consulting traffic engineers
- E.** Memorandum dated 2.6.14 from Gordon Munro, the consulting engineer reviewing this project
- F.** Neighborhood meeting minutes
- G.** Pre-application meeting minutes
- H.** Architectural and site plans
- I.** Park plans
- J.** Lighting plan and light specification sheets
- K.** Tentative plat
- L.** Master plan conceptual drawing
- M.** Applicant's drainage study and DEQ approval letter
- N.** SUB 05-12 Final Findings & Order
- O.** Development Agreement
- P.** Modification letters
- Q.** Citizen and agency comments/written testimony

III. APPLICABLE CRITERIA & FINDINGS

Major approval criteria used in evaluating this application are the following chapters from the *City of Canby's Land Development and Planning Ordinance (Zoning Code)*:

- 16.08 General Provisions
- 16.10 Off-street Parking and Loading
- 16.16 R-1 Zone

- 16.21 Residential Design Standards
- 16.43 Outdoor Lighting Standards
- 16.46 Access Limitations on Project Density
- 16.56 Land Division General Provisions
- 16.62 Subdivisions-Applications
- 16.64 Subdivisions-Design Standards
- 16.68 Subdivisions Final Procedures and Recordation
- 16.86 Street Alignments
- 16.89 Application and Review Procedures
- 16.120 Parks, Open Space, and Recreation Land General Provisions

Excerpts from the code are highlighted below in **gray**, with findings and discussion after the citations. If not discussed below, other standards from the Code are either met fully, not applicable, and/or do not warrant discussion.

IV. **MAJOR ISSUES FOR PLANNING COMMISSION CONSIDERATION**

The following is a list of staff interpretations and potential conditions of approval that the Planning Commission may want to discuss/comment on and/or use as a basis to apply additional conditions of approval:

- Discuss/comment on applicant negotiations with City Council to install traffic calming devices in exchange for transportation SDC credits and discuss/comment on applicant request for transportation SDC credits for half street improvements abutting the St. Patrick's Church property. See 16.08.150 pages 5-6.
- Discuss/comment on staff's residential driveway width condition. See 16.10.070(B)(9)(b) pages 10-11.
- Discuss/comment on code's conflict with Canby's Public Works Design Standards' driveway-to-driveway separation requirement. See 16.10.070(B)(9)(d) page 11.
- Discuss/comment on code's conflict with Canby's Public Works Design Standards' lot intersection-to-driveway spacing . See 16.10.070(B)(10)(f) page 11.
- Discuss/comment on staff's list of lots designated as infill homes. See 16.21.050 pages 13-14.
- Inquire if the applicant is willing to accept a one-story restriction on homes designated as infill and consider adding to the conditions of approval. See 16.21.050 page 14.
- The Planning Commission should determine if the proposed lighting is satisfactory or if alternative lighting with more shielding should be required. See 16.43.060 pages 16-17.
- The Planning Commission should determine if the proposed lighting is satisfactory or if lighting with lumen limits should be required. See 16.43.070 page 18.
- Discuss/comment on staff's interpretation of Elm Street width, parking restrictions along Elm, and potential parking restrictions on 28' streets. See 16.46.010 pages 19-20.
- Discuss/comment on staff's interpretation of parking standards in cul-de-sacs— See 16.46.010(D) page 20.
- Discuss/comment on street connectivity. See 16.64.010(A) page 21.
- Discuss/comment on the proposed street cross sections and conformance with TSP standards. See 16.64.010(A)(3) page 23-25.

- Discuss/comment on proposed 4.5' sidewalks with a 6" curbs. Determine if 6 foot sidewalks should be required; specify if the 6" curb is to be included in sidewalk width measurement. See 16.64.010(A)(3) page 24.
- Discuss/comment on applicant's proposed curb-tight sidewalks along NW 12th Avenue. See 16.64.010(A)(3) page 24-25.
- Discuss/comment on Douglas Street alignment with the existing Douglas spur off NW 9th. See 16.64.010 (D) page 26.
- The Planning Commission should determine if a larger cul-de-sac for "B Street" should be required. See 16.64.010(I)(2) pages 27-28.
- Discuss/comment on the proposed block lengths. See 16.64.020(A) page 30. Discuss/comment on pedestrian way requirements See 16.64.030(C) pages 31-32.
- Discuss/comment on access restrictions for lots 70 and 71. See 16.64.040(C) page 33.
- Discuss/comment on SUB 05-12 conflict with access standards of 16.64.040(C)-see page 33.
- Give input on the park's design. See 16.64.070(B)(10) page 37.

Chapter 16.08 General Provisions

16.08.090 Sidewalks required.

B. The Planning Commission may impose appropriate sidewalk and curbing requirements as a condition of approving any discretionary application it reviews.

Findings:

The applicant is proposing curbing and sidewalks along all proposed streets. See the discussion under 16.64.010(A)(3).

16.08.110 A-D Fences

Findings: If the applicant proposes fencing, they must comply with the fence regulations of 16.08.110 A-D. In addition, per 16.64.070(R): "No fence/wall shall be constructed throughout a subdivision where the effect or purpose is to wall said project off from the rest of the community." No fencing or walls is shown on the submitted plans.

16.08.150 Traffic Impact Study (TIS).

Contains standards pertaining to traffic studies including purpose, scoping, determination, submittal requirements, content, methodology, neighborhood and through-trip studies, mitigation, conditions of approval, and rough proportionality determination.

Findings: The applicant was required to conduct a traffic study; copies of the study are in the Planning Commission packet. Because the project site is categorized as an "area of special concern" in the city's Comprehensive Plan, the applicant was required to prepare a Master Plan of the entire area for all phases during the development of the first phase of the subdivision. The current traffic study states that since the traffic study conducted for the master plan studied the impacts to the surrounding roadway network, no additional traffic analysis was required to determine traffic impacts on surrounding roadways for each phase.

The Development Agreement does require that each phase be evaluated for the design of the proposed roadway facilities, site circulation, and intersection safety. In addition, based on resident concerns, the current traffic study evaluated the speed of traffic along Birch and resident wishes for a marked and signed crosswalk across N. Birch at NW 10th Street. A summary of the traffic study's analysis and findings is as follows:

- The Development Agreement states that the design of the boulevard and potential vehicle conflicts, particularly at the southern terminus, be studied with Phase II. The study did not bring up any significant safety issues in this area. The applicant is proposing traffic control "triangles" at the each end of the park strip (depicted on the cover page of the submitted Phase II plans). Public Works has requested that these triangles be stamped concrete with mountable curbs rather than planted for maintenance purposes-see **Condition #23**.
- Adequate sight distance is provided at existing intersections and could be provided at proposed intersections.
- No crash trends were found at study intersections.
- The overall design is in compliance with the TSP.
- Review of roadway signage and striping should be conducted. **Conditions #19-21** state that the applicant shall submit a roadway signage and striping plan and that the contract city engineer for this project and the Public Works street department shall approve the roadway signage and striping plan prior to the construction of public improvements. Gordon Munro, the consulting engineer assigned to review this proposal, also commented that the striping at the entrance and exit of the one-way couplet on Elm Street was of particular concern and needs to be reviewed and approved as part of the public improvement plans for this project.
- Street lighting should be designed to city standards; see **Conditions # 2, 3, & 45** which address Canby Utility approvals. Street lighting is subject to the poles and fixtures made available by Canby Utility.
- A crosswalk at NW 10th and Birch was not found to be warranted by vehicle volumes and pedestrian levels.
- Traffic calming devices such as speed cushions or driver speed feedback signs should be installed at four specified locations along Birch. However, the traffic study noted existing and future traffic speeds along Birch are not due to direct impacts generated by the proposed development, but by existing traffic patterns and behavior.

Therefore, the traffic study does not identify any required mitigation measures for the proposed development. However, the City Council is aware of the traffic speeding on Birch Street and the west end of Territorial Road and is working with the neighborhood association through the Traffic Safety Commission to arrive at an acceptable solution and possible funding sources for the chosen traffic calming solutions. The applicant has volunteered in the past to assist with possible traffic calming measures but is requesting possible exchange for transportation SDC credits to do so. City staff and/or the Planning Commission does not have the authority to waive or amend SDCs; therefore staff recommends that the Planning Commission defer any proposed traffic calming requirements or SDC credit exchanges to the authority of the City Council. However, neighborhood concerns about existing traffic issues in the area of this proposed subdivision will likely be voiced to the Planning Commission; staff has proposed **Condition #10** to ensure that the applicant addresses neighborhood traffic calming/SDC credits with the City Council.

Additionally, the applicant has requested transportation SDC credits for a 40 foot paved roadway (the new TSP calls for a 36 foot paved roadway) and for half street improvements abutting the St. Patrick's Church property. Again, City staff and/or the Planning Commission do not have the authority to waive or amend SDCs; therefore staff recommends that the Planning Commission defer any SDC credit requests to the authority of City Council.

16.08.160 Safety and Functionality Standards

The City will not issue any development permits unless the proposed development complies with the city's basic transportation safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submission of a development permit application, an applicant shall demonstrate that the development property has or will have the following:

- A. Adequate street drainage, as determined by the city.
- B. Safe access and clear vision at intersections, as determined by the city.
- C. Adequate public utilities, as determined by the city.
- D. Access onto a public street with the minimum paved widths as stated in Subsection E below.
- E. Adequate frontage improvements as follows:
 - 1. For local streets and neighborhood connectors, a minimum paved width of 16 feet along the site's frontage.
 - 2. For collector and arterial streets, a minimum paved width of 20 feet along the site's frontage.
 - 3. For all streets, a minimum horizontal right-of-way clearance of 20 feet along the site's frontage.
 - 4. Compliance with mobility standards identified in the TSP. If a mobility deficiency already exists, the development shall not create further deficiencies.

Findings:

- See **Conditions #39-44** regarding stormwater
- See discussion of clear vision requirements under Chapter 16.16.
- The development must meet all city public works requirements and the requirements of applicable utility agencies (**Conditions #2, 3, & 45**) prior to the issuance of building permits, the construction of public improvements, and the recordation of the final subdivision plat.
- The applicant proposes paved streets in compliance with the standards in (E) above.
- See discussion under 16.64.010(A)(3) for compliance with standards of the TSP; the traffic study found the overall design complies with the TSP.

Chapter 16.10 Off Street Parking & Loading

16.10.040 Prohibited near intersections.

In no case will off-street parking be allowed within a vision clearance area of an intersection.

Findings: Compliance with vision clearance standards in 16.16 will be verified during the building permit process.

16.10.050 Parking standards designated

The parking standards set out in Table 16.10.050 shall be observed.

TABLE 16.10.050

Off-street Parking Provisions - The following are the minimum standards for off-street vehicle parking:

USE	PARKING REQUIREMENT
Residential Uses:	
a. Single-family dwellings	2.00 spaces per dwelling unit for new construction. (Existing single-family dwellings having only a single parking space shall not be considered to be nonconforming.)

Findings: Adequate parking for the proposed new single family homes will be verified during the building permit process.

16.10.070 Parking Lots and Access

A. Parking Lots. A parking lot, whether as accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:

3. Areas used for standing or maneuvering of vehicles shall have paved asphalt, concrete, solid concrete paver surfaces, or paved "tire track" strips maintained adequately for all weather use and so drained as to avoid the flow of water across sidewalks or into public streets, with the following exception:
4. The full width of driveways must be paved in accordance with (3) above:
 - a. For a minimum of 20 feet from the right-of-way line back into the private property to prevent debris from entering public streets, and
 - b. To within 150 feet of all portions of the exterior wall of the first story of any structure(s) served by the driveway to ensure fire and emergency service provision.

Findings: The proposed driveways are to be paved per above; exception standards are noted in this section; compliance with above is verified during the building permit process.

TABLE 16.10.070

Minimum dimensional Standard for Parking

This table and Figure 16.10.070 provide the minimum dimensional standards for parking areas and spaces.

A = Parking angle in degrees

D = Minimum clear aisle width

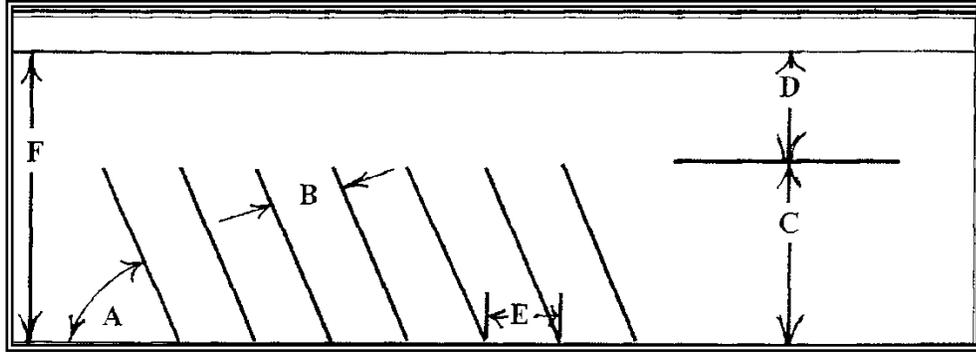
B = Minimum stall width

E = Minimum clear stall distance at bay side

C = Minimum stall depth

F = Minimum clear bay width

A	B	C	D	E	F
0 (parallel)	8'0"	-	12'0"	22'0"	20'0"
30	8'6"	16'4"	12'0"	17'0"	28'4"
45	8'6"	18'9"	12'6"	12'0"	31'3"
60	8'6"	19'10"	18'0"	9'10"	37'10"
90	8'6"	18'0"	24'0"	8'6"	42'0"



Findings: Parking spaces must meet the dimensional requirements of Table 16.10.070; parking dimensions will be verified during the building permit process.

6. Groups of more than four (4) parking spaces shall be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.
7. Off-street parking areas, and the accesses to them, shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress and the maximum safety of pedestrian and vehicular traffic on the site and in adjacent roadways. The Planning Director or Planning Commission may require engineering analysis and/or truck turning diagrams to ensure safe and efficient traffic flow based on the number and type of vehicles using the site, the classification of the public roadway, and the design of the parking lot and access drives.
8. Parking bumpers or wheel stops shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.

Findings: These standards will be verified for compliance during the building permit process; however these standards generally apply to commercial and industrial uses and therefore no issues are anticipated.

B. Access.

2. The City of Canby encourages joint/shared access. Owners of two (2) or more uses, structures, or parcels of land may agree to, or may be required by the City to, utilized jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designed in this ordinance, provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts shall be placed on permanent files with the city recorder.

Findings: The applicant is proposing joint driveways for some lots along Elm. Driveways and access spacing will be verified for code compliance during the building permit process.

3. All ingress and egress shall connect directly with public streets.
4. Vehicular access for residential uses shall be brought to within fifty (50) feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.

5. Required sidewalks shall extend from the ground floor entrances or the ground floor landing of a stairs, ramps or elevators to the sidewalk or curb of the public street or streets that provide the required access and egress.

Findings: These standards will be verified for compliance during the building permit process.

6. To afford safe pedestrian access and egress for properties within the city, a sidewalk shall be constructed along all street frontages, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to city standards except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks shall be constructed to a design, and in a manner approved by the Site and Design Review Board. Sidewalks approved by Board may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks shall provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction shall include construction of the curb and gutter section to grade and alignment established by the Site and Design Review Board.

Findings: The applicant is proposing sidewalks along all proposed streets. See the discussion under 16.64.010(A)(3).

Minimum Access Requirements			
16.10.070(B)(8): Minimum access requirements for residential uses - ingress and egress for residential uses shall not be less than the following (except that in the case of flag lots, section 16.64.0400) shall apply):			
<i>Dwelling units</i>	<i>Minimum number of accesses required</i>	<i>Minimum access width</i>	<i>Sidewalks & Curbs (in addition to driveways)</i>
1 or 2	1	12 feet	none required

Findings: The above access requirements will be verified for compliance during the building permit process.

9. Maximum driveway widths and other requirements except for single-family dwellings [see subsection (d) below]:

b. No driveways shall be constructed within five (5) feet of an adjacent property line, except when two (2) adjacent property owners elect to provide joint access to their respective properties as provided by subsection 2.

Findings: Canby's Public Works Design Standards require a minimum driveway width of 12' and a maximum width of 24'; the Code does not specify residential driveway widths. For clarification, **Condition #72** states that the minimum residential driveway width shall be 12'

and the maximum width shall be 24'. There is an exception allowing homes with 3 or more garages to have a maximum 28' driveway width.

- d. The minimum distance between two driveways on one single-family residential lot shall be thirty (30) feet. There is no minimum setback distance between a driveway and the property line for driveways on single-family residential lots.

Findings: The above standard conflicts with Canby's Public Works Design Standards' driveway-to-driveway separation requirement; consistency between the two documents is a needed Code amendment. The Public Works Design Standards only require a 10 foot driveway-to-driveway separation with no specification for driveways on the same lot (Section 2.211(g)). Staff proposes to address this at the building permit stage and/or with code amendments.

10. Distance Between Driveways and Intersections- Except for single-family dwellings [see subsection (f) below] the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection:

- f. The minimum distance between driveways for single-family residential houses and an intersection shall be thirty (30) feet. The distance shall be measured from the curb intersection point [as measured for vision clearance area (16.04.670)].

Findings: Lot intersection-to-driveway spacing will be verified for compliance during the building permit process. Canby's Public Works Design Standards require a more restrictive 50' intersection-to-driveway separation; consistency between the two documents is a needed Code amendment. Staff proposes to address this at the building permit stage and/or with code amendments.

16.16 R-1 Low Density Residential Zone

16.16.010 Uses permitted outright

Uses permitted outright in the R-1 zone shall be as follows:

- A. Single-family dwelling; one single-family dwelling per lot;

Findings: The applicant proposes to construct single family homes on the lots created by this subdivision.

16.16.030 Development standards

The following subsections indicate the required development standards of the R-1 zone:

- A. Minimum and maximum lot area: seven thousand (7,000) square feet minimum, and ten thousand (10,000) square feet maximum, per single-family dwelling...

Findings: The proposed lots are in compliance with the above minimum and maximum lot size standards for the R-1 zone.

- C. Minimum width and frontage: sixty feet, except that the Planning Commission may approve lots having less frontage subject to special conditions to assure adequate access.

Findings: Some lots have angled/curving lot frontages, while some of the cul-de-sac lots have less than the required lot frontages. See discussion under 16.64.040(C), which allows the Planning Commission to permit angled/curving lot frontages and cul-de-sac lot frontages as long as the lots have the required minimum lot size and adequate access.

D. Minimum yard requirements:

1. Street yard: twenty feet on side with driveway; fifteen feet for all other street sides; except that street yards may be reduced to ten feet for covered porches only;
2. Rear yard: all corner lots, ten feet single story or fifteen feet two-story; all other lots, fifteen feet single story or twenty feet two-story. One story building components must meet the single story setback requirements; two story building components must meet the two-story setback requirements;
3. Interior yard: Seven feet, except as otherwise provided for zero-lot line housing.

Findings: Setbacks will be verified for compliance during the building permit process.

5. Infill standards may also apply. See CMC 16.21.050.

Findings: Conditions # 53 & 73 addresses infill requirements.

E. Maximum building height:

1. Principal building: thirty-five feet.

Findings: Height requirements will be verified for compliance during the building permit process. Infill height standards in 16.21 will also apply to some of the proposed homes; these standards contain restrictions on heights of infill homes in order to maintain the character of existing one-story neighborhoods. See 16.21.050 for more discussion; **Conditions # 53 & 73** addresses infill requirements.

16.16.030(C)(2):

Contains height standards for detached accessory structures

Findings: Height requirements for accessory structures are verified for compliance during the building permit process.

F. The maximum amount of impervious surface allowed in the R-1 zone shall be 60 percent of the lot area.

Findings: The above maximum impervious surface requirement will be verified for compliance during the building permit process.

G. Other regulations:

1. Vision clearance distance shall be ten feet from a street to an alley or a street to a driveway, and thirty feet from a street to any other street.

2. All setbacks to be measured from the foundation line of the building; overhangs shall not exceed two feet; mechanical units, used for the heating/cooling of residential units are exempt from interior and/or rear yard setback requirements.
3. Required yards on southern and western exposures may be reduced by not more than five feet for eaves or canopies to provide shade.
4. Accessory buildings shall not have a larger footprint than the primary building, unless lot area exceeds twelve thousand square feet.

Findings: The above requirements will be verified during the building permit process. During the public improvement stage; **Condition #26**, states that all landscaping shall maintain the above vision clearance.

16.21 Residential Design Standards

16.21.020 Applicability and review procedure for single family and two family dwellings.

The standards in sections 16.21.030 through 16.21.050 apply to single family dwellings, manufactured homes, and two family dwellings (duplexes). Where a proposal is for an alteration or addition to a existing development, the standards of this section apply only to the portion being altered or added. If the applicant can demonstrate that implementation of the standards would be impractical due to lot size, shape, slope, or other natural feature of the property that does not generally apply to other properties in the city, the Planning Director may waive any of the standards which are demonstrated to be impractical.

16.21.030 Single family and two-family dwelling design menu.

16.21.040 Main entrances for single family and two family dwellings.

Findings: The residential design standards of Chapter 16.21.020-040 are applicable to the proposed single family homes and will be verified for compliance during the building permit process.

16.21.050 Infill Homes

- A. Purpose.** The purposes of these standards are to promote compatibility between new development and existing homes, and, to provide for the efficient use of residential land.
- B. Applicability.** These standards apply to all new infill homes as defined by 16.04.255. The standards also apply to remodels of existing infill homes where the remodel increases the homes floor area by more than 50%, not including garage area.
- C. Standards for Infill Homes (see figure 16.21-6)**
 1. **Lot Coverage -** Infill homes exceeding one story shall not exceed a lot coverage of 35%. In this standard, lot coverage applies to portion of the lot covered by structures, not including garage area.
 2. **Garage Standards -** Infill homes must meet the Option 1 garage standards in 16.21.030. The infill home is exempt from garage standards if located on a flag lot, or, if an adjacent home fronting the same street does not comply with the garage standards in 16.21.030(C).

3. *Similar Front Setback - Infill homes shall establish a front yard setback that is within 5 feet of the front yard setback for the closest adjacent home on the same side of the street. This standard does not apply if the closest adjacent home has a front yard setback greater than 30 feet.*
4. *Maximum Height. Infill homes shall have a maximum height of 28 feet.*
5. *Step-up Standard. At the interior and rear setback line, the infill home shall not exceed a single story exterior wall height (not to exceed 10 feet from finished floor to top plate). The area within a gable is not included in the wall height. Finished vaulted ceilings or unfinished attic spaces without exterior windows are allowed in the gable area. The building may increase in height by one foot vertically for every foot horizontally away from the setback line, up to the maximum height allowed. Building height is measured as defined by the Oregon Structural Specialty Code. The Planning Director or Planning Commission may exempt infill homes from this standard for any yard that abuts a property on which the existing home is greater than one story.*

Findings: Infill homes are defined in 16.04.255 as “existing and new single family dwellings, manufactured homes, two-family dwellings, duplexes and triplexes on lots that are located in an R-1 or R-1.5 zoning district, and that have existing homes on two adjacent sides. Each adjacent home must be within 25 feet of the common lot line with the infill homes and have pre-existed for at least 5 years (dated from the existing homes final building permit approval).”

Infill home standards in Chapter 16.21 permit homes up to a maximum height of 28 feet and contain step-up standards to prevent tall 2-story structures directly abutting existing 1-story homes. Per the infill definition above, in order to be considered an infill home, the new home must contain an existing home on two sides; many of the proposed homes will abut an existing home on one only side and are not considered infill homes.

Lots 52 and 54 in Phase II have the potential to meet the “infill home” definition above; therefore staff has added these lots to the list of infill lots (lots 42, 59, 60, and 74) that were assigned during the approval process for the Master Plan/Development Agreement/SUB 05-12. Note that lots 42, 59, 60, and 74 were conditioned to be subject to 16.21.050 even though they do not have existing homes on two adjacent sides.

In addition, lots 44 and 46 are adjacent to Phase I lots and may have been constructed over 5 years ago and meet the above infill definition. However, these lots are not being considered as infill homes.

Neighbors have expressed a wish to restrict infill homes to one story, but the code does not permit such a restriction. However, the Planning Commission may inquire if the applicant is willing to accept such a restriction. If the applicant is willing, a condition of approval restricting infill homes to one story could be considered. If such a condition were to be imposed, staff suggests specifying a maximum height instead of using the ambiguous term “one-story”.

Therefore, as a **Conditions # 53 & 73** state that lots 42, 52, 54, 59, 60, 74 are subject to the infill standards of 16.21.050; building permit applications for these lots shall include the distances from lot lines to neighboring residences as well as existing heights and setbacks of the neighboring buildings. The Planning Commission can determine the appropriateness of conditioning a one-story/height restriction to these infill lots.

16.43 Outdoor Lighting Standards

16.43.030 Applicability.

The outdoor lighting standards in this section apply to the following:

A. New uses, buildings, and major additions or modifications:

1. For all proposed new land uses, developments, buildings, and structures that require a building permit, all outdoor lighting fixtures shall meet the requirements of this Code.

Findings: The code's language above states that all new "developments" are subject to 16.43. Staff interprets a subdivision as a development; therefore the standards of 16.43 are applicable to this proposal.

16.43.040 Lighting Zones.

A. Zoning districts designated for residential uses (R-1, R-1.5 and R-2) are designated Lighting Zone One (LZ 1).

B. The designated Lighting Zone of a parcel or project shall determine the limitations for lighting as specified in this ordinance.

Table 16.43.040 Lighting Zone descriptions

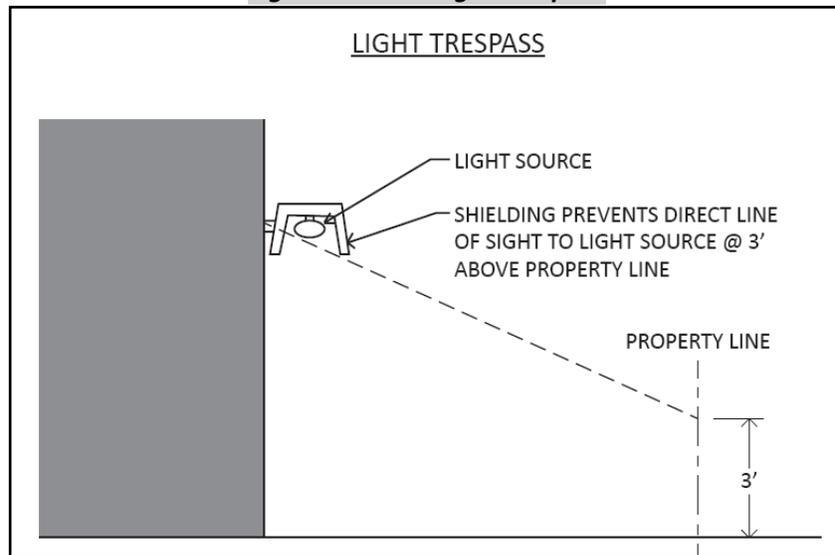
Zone	Ambient Illumination	Representative Locations
LZ 1	Low	Rural areas, low-density urban neighborhoods and districts, residential historic districts. This zone is intended to be the default for residential areas.

Findings: LZ 1 is applicable to this proposal.

16.43.060 Prohibited Light and Lighting.

A. All outdoor light sources, except street lights, shall be shielded or installed so that there is no direct line of sight between the light source or its reflection at a point 3 feet or higher above the ground at the property line of the source. Light that does not meet this requirement constitutes light trespass. Streetlights shall be fully shielded. However, the applicant is permitted to have some unshielded lighting if lumens are within the limits of Table 16.43.070 below.

Figure 16.43.1: Light Trespass



Findings: The code states above that “Streetlights shall be fully shielded”. The definitions below and the depiction above attempt to clarify the meaning of “fully shielded”; in addition an internet search provides many pictorial examples of shielded lighting:

16.43.020(M) Definitions:

“Shielding. A device or technique for controlling the distribution of light. Four levels of shielding are defined as follows:

1. Fully Shielded. A luminaire emitting no luminous flux above the horizontal plane;

2. Shielded. A luminaire emitting less than 2.0 percent of its luminous flux above the horizontal plane;

3. Partly Shielded. A luminaire emitting less than 10 percent of its luminous flux above the horizontal plane;

4. Unshielded. A luminaire that may emit its flux in any direction.”

The applicant stated in their letters dated 1/2/14 and 1/17/14 that an 18-20 foot cobra style aluminum pole with an arm is proposed that is similar to the poles used for Phase I (see Google Earth picture below). The applicant also included a GE lighting brochure that depicts the designs for the “GE Evolve” style lighting proposed along the local streets in Phase II.



Proposed lighting
for local streets

For the lighting along NW 10th Avenue, the applicant states that they plan to use an LED cobra on each of the existing wood poles and will look identical to the existing lighting along NW 10th Avenue except that it will be LED. (see Google Earth picture below). The applicant also included a GE lighting brochure that depicts the designs for the “GE Evolve” style lighting proposed along 10th Avenue.



Proposed lighting
For NW 10th Ave

The Planning Commission should determine if this proposed lighting is satisfactory or if alternative lighting with more shielding should be required.

16.43.070 Luminaire Lamp Lumens, Shielding, and Installation Requirements.

A. All outdoor lighting shall comply with the limits to lamp wattage and the shielding requirements in Table 16.43.070 per the applicable Lighting Zone. These limits are the upper limits. Good lighting design will usually result in lower limits.

- B. The city may accept a photometric test report, lighting plan, demonstration or sample, or other satisfactory confirmation that the luminaire meets the requirements of the shielding classification.
- C. Such shielded fixtures must be constructed and installed in such a manner that all light emitted by the fixture complies with the specification given. This includes all the light emitted by the fixture, either directly from the lamp or by a diffusing element, or indirectly by reflection or refraction from any part of the fixture. Any structural part of the fixture providing this shielding must be permanently affixed.

Table 16.43.070 – Luminaire Maximum Lumens and Required Shielding

Lighting Zone	Fully Shielded	Shielded	Partly Shielded	Unshielded (Shielding is highly encouraged. Light trespass is prohibited.)
LZ 1	2600 lumens or less	800 lumens or less	None Permitted	Low voltage landscape lighting and temporary holiday lighting.

Findings: The applicant stated in their letter dated 1/2/14 that the proposed lighting along all local streets will be over 3,000 lumens and that the proposed lighting for the lights along NW 10th Avenue will 5,200 lumens; the applicant states in their letter dated 1.17.14 that they believe the lumen limits were not intended for streetlights. The lumen values in the code were derived from Chapter 16.43’s original wattage limits of 150 for fully shielded and 60 for shielded (prior to code revisions in 2013).

The Planning Commission should determine if this proposed lighting is satisfactory or if lighting within the lumen limits from the table above should be required.

16.43.080 Height Limits.

Pole and surface-mounted luminaires under this section must conform with Section 16.43.070.

- A. Lighting mounted onto poles or any structures intended primarily for mounting of lighting shall not exceed a mounting height of 40% of the horizontal distance of the light pole from the property line, nor a maximum height according to Table 16.43.080, whichever is lower. The following exceptions apply:
 - 5. Street and bicycle path lights.

Findings: Per above, mounting height standards do not apply to streetlights.

16.43.110 Lighting Plan Required

A lighting plan shall be submitted with the development or building permit application and shall include:

- A. A site plan showing the location of all buildings and building heights, parking, and pedestrian areas.
- B. The location and height (above grade) of all proposed and existing luminaires on the subject property.
- C. Luminaire details including type and lumens of each lamp, shielding and cutoff information, and a copy of the manufacturer’s specification sheet for each luminaire.

- D. Control descriptions including type of control (time, motion sensor, etc.), the luminaire to be controlled by each control type, and the control schedule when applicable.
- E. Any additional information necessary to demonstrate compliance with the standards in this section.

Findings: The standards of 16.43 are applicable to new single family homes; the code's language above states that all new "developments" are subject to 16.43. Staff interprets a subdivision as a development; therefore the standards of 16.43 are applicable to this proposal.

16.46 Access Limitations on Project Density

16.46.010 Number of units in residential development.

A major factor in determining the appropriate density of residential development, particularly in higher density areas, is vehicular access. In order to assure that sufficient access is provided for emergency response as well as the convenience of residents, the following special limitations shall be placed on the allowable number of units in a residential development:

A. Single-family residential access, public and private roads:

1. Roads shall be a minimum of 28 feet in width with parking restricted to one side only, or a minimum of 36 feet in width with no parking restriction.

Findings: Elm Street adjacent to the park strip is proposed to be 20' wide, short of the above 28' standard. However, adding both one-way portions of Elm would make a 40' road. The applicant's narrative stated plans for no parking along the one-way portions of Elm and the Fire Department submitted comments that they would like 20' clear isles. Therefore **Condition #22** is proposed that prohibits parking along the one-way portions of Elm in the form of no parking signs and/or painted curbs.

Elm not adjacent to the park is proposed to be 36'. NW 11th, NW 12th, and Douglas are proposed to be 28' in width. "B" Street, to be named NW 11th Place, is 28' with a 29' cul-de-sac radius. NW 10th is proposed to be 40' wide.

SUB 05-12 condition #10, as well as the provisions in the code above, states that 28' streets (NW 12th, NW 11th, "B" Street, and Douglas) shall be limited to parking on one side. It should be noted that the TSP local street standards in Figure 7-6 permit parking on both sides on a 28' paved street; this restriction conflicts with what would otherwise be allowed by the above code standard. Restricting on-street parking should not be taken lightly as it decreases the options available to the owners of residences that are subject to the no parking requirement. The TSP standards also conflict with the Fire Department's desired standard to maintain a 20 foot clear access route, although the minimum paved access clearance required is only 12 feet.

On street parking can have the positive benefit of "narrowing" streets and slowing traffic. In addition, if no parking restrictions were made, there are enforcement logistics that the city would need to address and adjacent property owners may not be receptive to a parking restriction in front of their homes. The Planning Commission should determine if parking shall be restricted to one side of 28' streets. Parking could be restricted in the form of no parking signs and/or painted curbs.

See 16.64.010(A)(3) for more discussion on street cross-sections.

2. The number of units permitted are as follows:

One access: 30 units

Two accesses: 132 units

Three accesses: 207 units

For more than three accesses, use the following formula: # of units permitted = $(60 \times (1 + (.05 \times \# \text{ of access points}))) \times (\# \text{ of access points})$

Findings: The proposal complies with the above standard; each lot will have an access.

D. All turnaround systems shall meet or exceed the requirements of the parking provisions of Chapter 16.10.

Findings: Staff believes the above standard means that room for parallel parking shall be met in cul-de-sacs in accordance with the dimensional parking standards of Table 16.10.070. If this is in fact what the above standard means, then it cannot be met because of narrow lot frontages in the cul-de-sac. Lot layouts would have to be changed by the applicant to allow parallel parking along all the cul-de-sac curbs. Staff has marked the above provision as a needed code edit/omission.

E. All on-site private roads and drives shall be designed and constructed to provide safe intersections and travel surfaces which will not result in hazards for motorists, bicyclists or pedestrians.

Findings: Chapter 16.10 parking provisions are verified during the building permit process. See discussion under 16.10 regarding access and other general provisions.

G. Public roads accessing any development shall be a minimum of two travel lanes (twenty-four (24) feet of paved width) to the nearest improved collector or arterial street...

Findings: The nearest collector is Holly to the east and the nearest arterial is Knights Bridge to the south; these roads are not directly adjacent to the proposed development so the above standard is not applicable.

16.46.020 Ingress and egress.

Ingress and egress to any lot or parcel, the creation of which has been approved by the Planning Commission, shall be taken along that portion fronting on a public street unless otherwise approved by the Planning Commission.

Findings: The proposal complies with the above standard; each lot will have an access from public streets.

16.46.030 Access connection.

A. Spacing of accesses on City streets. The number and spacing of accesses on City streets shall be as specified in Table 16.46.030. Proposed developments or land use actions that do not comply with these standards will be required to obtain an access spacing exception and address the joint and cross access requirements of this Chapter.

TABLE 16.46.030

Access Management Guidelines for City Streets*

Street Facility	Maximum spacing** of roadways	Minimum spacing** of roadways	Minimum spacing** of roadway to driveway***	Minimum Spacing** driveway to driveway***
Neighborhood/Local	600 feet	150 feet	50 feet****	10 feet

** Measured centerline on both sides of the street

*** Private access to arterial roadways shall only be granted through a requested variance of access spacing policies when access to a lower classification facility is not feasible (which shall include an access management plan evaluation).

**** Not applicable for single-family residential driveways; refer to section 16.10.070(B)(10) for single-family residential access standards

Note: Spacing shall be measured between access points on both sides of the street.

Findings: The development proposes neighborhood and local streets per Figure 7-1 of the TSP.

- The above 600’ maximum roadway spacing standard is met.
- The above 150’ minimum roadway spacing is met- note that NW 12th takes a jog and is not in alignment because of the existing layout of NW 12th to the east and west of this proposal.
- Roadway to driveway standards will be verified during the building permit process; see the discussion under 16.10.070(B)(10).
- Driveway-to-driveway spacing will be verified during the building permit process; see 16.10.070(B)(9).

16.56 Land Division Regulation

Findings: Chapter 16.56 contains general language regarding land divisions and has no specific evaluation criteria.

16.62 Subdivisions-Applications

16.62.020 Standards and criteria.

Applications for a subdivision shall be evaluated based upon the following standards and criteria:

A. Conformance with other applicable requirements of the Land Development and Planning Ordinance;

B. The overall design and arrangement of lots shall be functional and shall adequately provide building sites, utility easements, and access facilities deemed necessary for the development of the subject property without unduly hindering the use or development of adjacent properties;

C. *Subdivision design and layout shall incorporate Low Impact Development techniques where possible to achieve the following:*

- 1.** *Manage stormwater through a land development strategy that emphasizes conservation and use of onsite natural features integrated with engineered stormwater controls to more closely mimic predevelopment hydrologic conditions.*
- 2.** *Encourage creative and coordinated site planning, the conservation of natural conditions and features, the use of appropriate new technologies and techniques, and the efficient layout of open space, streets, utility networks and other public improvements.*
- 3.** *Minimize impervious surfaces.*
- 4.** *Encourage the creation or preservation of native vegetation and permanent open space.*
- 5.** *Clustering of residential dwellings where appropriate to achieve (1-4) above. The arrangement of clustered dwellings shall be designed to avoid linear development patterns.*

Findings: This application shows conformance with the above standards. See 16.64.070(D) for discussion on the proposed stormwater/LID techniques.

D. *It must be demonstrated that all required public facilities and services are available, or will become available through the development, to adequately meet the needs of the proposed land division.*

Findings: **Conditions #2, 3, & 45** address public facility and service requirements.

E. *The layout of subdivision streets, sidewalks, and pedestrian ways supports the objectives of the Safe Routes to Schools Program by providing safe and efficient walking and bicycling routes within the subdivision and between the subdivision and all schools within a one-mile radius. During review of a subdivision application, city staff will coordinate with the appropriate school district representative to ensure safe routes to schools are incorporated into the subdivision design to the greatest extent possible.*

Findings: The application was routed to the Canby School District for comment; no comments were received at the time of this staff report. All streets contain sidewalks that promote safe routes to schools. The closest public schools are Eccles Elementary and Knight Elementary, both are approximately 0.4 miles from the proposed development. See 16.64.010 (A)(3) for more discussion on sidewalks and streets.

16.64 Subdivisions-Design Standards

16.64.010 Streets

A. *Generally. The location, width and grade of streets shall be considered in relation to existing and planned streets, to topographical conditions, to public convenience and safety, and to the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation pattern with intersection angles, grades, tangents, and curves appropriate for the traffic to be carried. Where location is not shown in a development plan, the arrangement of streets shall either:*

1. Provide for the continuation or appropriate projection of existing principal streets in surrounding areas; or

Findings: The proposed streets to the greatest extent possible extend to surrounding street patterns and layouts:

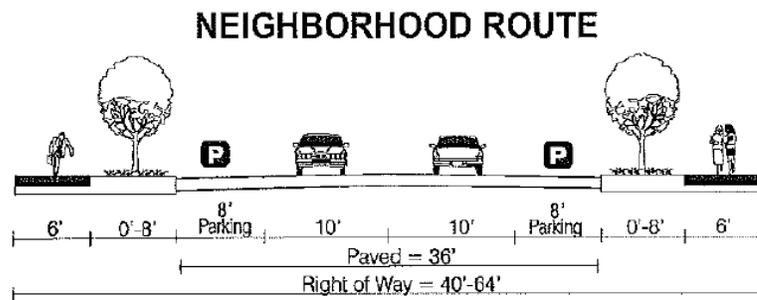
- NW 10th Avenue is proposed to be extended with this development.
- NW 11th is restricted by surrounding properties from allowing extension.
- “B” Street, to be named “NW 11th Place”, is restricted by surrounding properties from allowing extension.
- N Douglas will connect NW 10th with NW 11th.
- Elm Street will be extended to NW 10th.
- NW 12th will be extended from the existing streets to the west and east; the existing east/west layout of NW 12th is not aligned and therefore NW 12th takes a north/south jog at Elm.

2. Conform to a plan for the neighborhood approved or adopted by the commission to meet a particular situation where topographical or other conditions make continuance of conformance to existing street patterns impractical;

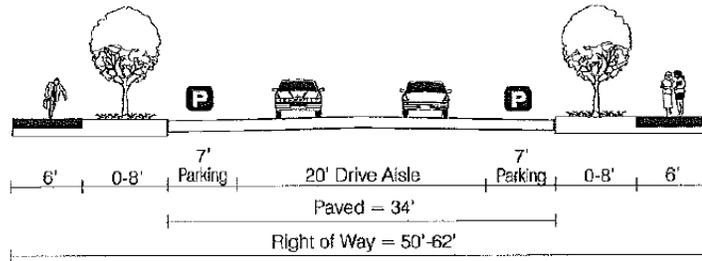
Findings: The master plan for Northwoods is part of the Planning Commission packet, titled “Northwood Estates, Canby, OR, Conceptual Development Plan” dated December 29, 2005. According to the Development Agreement dated 1/11/07, this subdivision application shall be bound to this master plan.

3. Minimum right-of-way and roadway width shall follow the requirements of the Canby Public Works Design Standards;

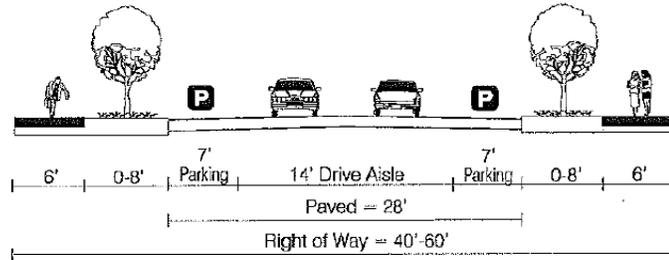
Findings: Canby’s Public Work’s Design Standards for roadway and right-of-way widths refer to the standards of the TSP. Figure 7-5 of the TSP calls for the following street cross sections:



STANDARD LOCAL STREET



LOW-VOLUME LOCAL STREET (<500 Vehicles Per Day)



- The TSP classifies NW 10th as a Neighborhood Route; Elm Street is likely considered as a Standard Local Street and the remaining streets in Phase II are likely Low Volume Local Streets.
- The cross sections indicated in the applicant's plans (depicted on "Street Sections and General Construction Notes", page 5 of 8 of the submitted plans) do not all align with the above TSP standards for sidewalk widths, parking widths, and roadway widths.
- The proposed sidewalks along Elm (not adjacent to the park) are partially on private property. **Condition #56** states that areas where sidewalks are partially located on private property shall be noted with a sidewalk easement on the final plat.
- The master plan for Northwoods is part of the Planning Commission packet, titled "Northwood Estates, Canby, OR, Conceptual Development Plan" dated December 29, 2005. According to the Development Agreement dated 1/11/07, this subdivision application shall be bound to this master plan. This conceptual plan does not specify street cross sections but does specify lot areas; the applicant likely is proposing street cross sections that accommodate the proposed lot areas.
- In addition, the traffic study concluded that the proposal meets the requirements of the TSP and the proposed streets meet the widths specified in SUB 05-12 Condition #10.
- Moreover, Condition #29 from SUB 05-12 states that 5' sidewalks are required on all frontages-this conflicts with the sidewalk width specified in the TSP; some of the proposed sidewalks are only 4.5 feet with a 6" curb, which may be interpreted as a 5' sidewalk.
- The Planning Commission could require 6 foot sidewalks so that sidewalks are in conformance with the above TSP standards. The sidewalks would then be partially on private property and would have to be indicated on the final plat with a sidewalk easement. If such a condition were to be proposed, the Planning Commission should specify if the 6" curb is to be included in the sidewalk width measurement.
- "Northwood Estates, Canby, OR, Conceptual Development Plan" dated December 29, 2005 shows planter strips along NW 12th Avenue; the applicant requests that the sidewalks along

NW 12th be curb-tight with no planter strips.

- The plans show bulb-out areas at Elm and NW 10th Avenue and Douglas and NW 10th Avenue. Public Works has requested that the bulb outs be paved with stamped concrete, therefore **Condition #24** is proposed.
- The planter strips along NW 10th are staying, but the applicant's original plans for using the strips for stormwater infiltration is proposed to be changed. Pervious pavement in the parking areas along 10th is instead proposed. The NW 10th planter strips should be planted with trees-see **Conditions # 57-58** regarding street trees. Vision clearance needs to also be maintained-see **Condition #26** regarding vision clearance.
- See 16.46.010(A)(1) for more discussion on street widths and parking restrictions.

4. Consider opportunities to incrementally extend and connect local streets to provide for safe and convenient bike and pedestrian circulation.

Findings: See the discussion of street connectivity under 16.64.010. There are no existing bike lanes adjacent to the development and no new bike lanes are proposed or called for in the TSP. The Final Findings, Conclusions, & Final Order for SUB 05-12 state in Condition #33 that shared (not striped) bike lanes are required on NW 10th Avenue-no additional improvements are needed to achieve a shared (not striped) bike lane; **Condition #29** re-states this condition for general knowledge. Additionally, the traffic study did not recommend any bike and pedestrian circulation improvements.

B. Permeable Surfaces. Permeable surfacing alternatives and on-site stormwater management facilities, are encouraged for street improvements. Permeable surfacing and LID stormwater management facilities shall be constructed in accordance with the Canby Public Works Design Standards and the manufacturer's recommendations. Permeable surfacing includes, but is not limited to: paving blocks, turf block, pervious concrete, porous asphalt, and other similar approved materials. Alternative surfacing methods may be approved for public and private roads, road shoulders, pedestrian ways, driveways, and easement service roads unless site constraints make use of such materials detrimental to water quality. Use of permeable surfacing methods shall meet the imposed load requirements for fire apparatus, and shall be subject to review and approval by the Canby Public Works Department.

Findings: The applicant proposes permeable pavement along NW 10th Avenue. Prior to the installation of public improvements, the applicant shall submit public improvement plans, including plans detailing permeable pavement areas. These plans shall be inspected and approved by Canby Public Works and the consulting city engineer reviewing this project prior to the installation of public improvements (**Condition #42**).

C. Reserve Strips. Reserve strips or street plugs controlling the access to streets will not be approved unless such strips are necessary for the protection of the public welfare or of substantial property rights, or both, and in no case unless the control and disposal of the land composing such strips is placed within the jurisdiction of the city, under conditions approved by the commission.

Findings: No reserve strips or street plugs are proposed.

D. Alignment. All streets other than minor streets or cul-de-sacs, shall, as far as possible, be in alignment with the existing streets by continuations of the center lines thereof. Jogs creating "T" intersections shall have centerline offsets of not less than one hundred fifty feet, unless it is found that community benefits of such an alignment outweigh its disadvantages.

Findings: NW 12th jogs because of the existing east/west misalignment adjacent to the proposal; it does not jog more than 150'. It appears Douglas Street will not align with the existing Douglas spur off NW 9th. All other proposed streets are in alignment with existing streets. See the street connection discussion under 16.64.010(A)(1).

E. Future Extension of Streets. Where a subdivision adjoins unplatted acreage, streets which in the opinion of the commission should be continued in the event of the subdivision of the acreage, will be required to be provided through to the boundary lines of the tract. Reserve strips, street plugs and temporary turnaround areas may be required to preserve the objectives of street extensions. Reserve strips and street plugs shall be deeded to the city prior to final plat approval. The Planning Commission may require that the costs of title insurance and recordation fees, if any, for such areas be borne by the subdivider. If, in the opinion of the city engineer, a traffic pedestrian, or safety hazard temporarily exists by the construction of a dead-end street, he may direct that a barricade of adequate design be installed at the developer's expense as one of the required improvement items for the subdivision.

Findings: The applicant is connecting to available adjacent street extensions. NW 11th and "B Street", to be named NW 11th Place, abut platted acreage and are unlikely to ever be extended.

F. Intersection Angles. Streets shall intersect one another at an angle as near to a right angle as possible, and no intersections of streets at angles of less than thirty degrees will be approved unless necessitated by topographic conditions. When intersections of other than ninety degrees are unavoidable, the right-of-way lines along the acute angle shall have a minimum corner radius of twelve feet. All right-of-way lines at intersections with arterial streets shall have a corner radius of not less than twelve feet.

Findings: All proposed intersection angles are at or near right angles except the NW corner of 11th at Elm is ~100 degrees and the SW corner of 11th at Elm is ~80 degrees. **Condition #25** states that the final street plans shall show that the right-of-way lines at the SW corner of 11th at Elm have a minimum corner radius of 12 feet.

G. Existing Streets. Whenever existing streets, adjacent to or within a tract, are of inadequate width, dedication of additional right-of-way shall be provided at the time of subdivision.

Findings: Streets adjacent to the proposed subdivision are adequate; see 16.64.010(A)(3) for the discussion on street and right of way widths.

H. Half Streets. Half streets, while generally not acceptable, may be approved where essential to the reasonable development of the subdivision, when in conformity with the other requirements of these regulations, and when the commission finds it will be practical to

require the dedication of the other half when the adjoining property is subdivided. Whenever a half street is adjacent to a tract to be subdivided, the other half of the street shall be platted within such tract. Reserve strips, street plugs, special signs and barricades may be required to preserve the objectives of half streets.

Findings: No half streets are proposed with this subdivision.

I. Cul-de-sacs. A cul-de-sac shall only be allowed when environmental or topographical constraints, existing development patterns, or compliance with other standards in this code preclude street extension and through circulation.

Findings: The applicant is proposing one cul-de-sac in Phase II, "B" Street (to be named NW 11th Place); adjacent property to the east prevents a through street.

When cul-de-sacs are provided, all of the following shall be met:

1. The cul-de-sac shall not exceed a length of 400 feet. Length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac;

Findings: The above provision is met.

2. The cul-de-sac shall be designed in accordance with the Canby Public Works Design Standards:

Chapter 2.206, Canby Public Works Design Standards, Cul-de-sacs and Eyebrows:

a. Cul-de-sacs shall only be allowed per the Canby Development Code Chapter 16.64.010. Cul-de-sacs and eyebrows shall be allowed only on local streets.

b. Cul-de-sacs shall not be more than four hundred (400) feet in length, and shall serve no more than 25 dwellings. The length of a cul-de-sac shall be measured along the centerline of the roadway from the near side right-of-way of the nearest through traffic intersecting street to the farthest point of the cul-de-sac right-of-way.

c. The minimum radius for a cul-de-sac bulb right of way shall be 54 feet with a minimum curb radius of 48 feet.

d. The minimum curb radius for transitions into cul-de-sac bulbs shall be twenty-eight (28) feet minimum and the right-of-way radius shall be sufficient to maintain the same right-of-way to curb spacing as in the adjacent portion of the road.

e. When cul-de-sacs are allowed, provisions for connectivity of other public facilities shall be made. Specifically, pedestrian connections as called for in the Canby Development Code Chapter 16.64.010, and looping of the water distribution system.

2.205 Intersections

Street Class Intersection Spacing (Ft.)

Local/Cul-de-sac 150 – 600

Findings: The proposed cul-de-sac, "B Street", to be named NW 11th Place, is a local street. The cul-de-sac length/intersection spacing is less than 400 feet and serves 7 dwellings. Adjacent private property to the east prevents a pedestrian connection from the cul-de-sac. **Conditions 2, 3, & 45** address utility agency requirements, including requirements CUB may have for

looping of the water distribution system.

The applicant states in their letter dated 1/2/14 that the proposed cul-de-sac curb radius is 29 feet and right-of-way radius of 35 feet.

Therefore, the cul-de-sac requirements above are met except for the 54' right-of-way radius and the 48' curb radius requirements. The conceptual master plan dated December 2005 shows the proposed cul-de-sac but it does not specify dimensions; the proposed dimensions likely accommodate the proposed lots. In addition, SUB 05-12 Condition of Approval #10 states that "the minimum curb radius for cul-de-sacs shall be 48-feet to facilitate maintenance vehicles per IFC standards." The Planning Commission should determine if this is an issue and if a larger cul-de-sac should be required. The Fire Department has OK'd the proposed cul-de-sac if lots 52, 53, and 54 have fire sprinklers installed per IFC and IBC standards-see **Condition #74**.

3. *The cul-de-sac may have a vegetated center island that will serve to treat stormwater runoff generated by the cul-de-sac. Specifications for cul-de-sac design are located in the Public Works Design Standards.*

Findings: City staff expressed maintenance concerns over having a vegetated center at the pre-application conference; a vegetated center island is not proposed.

4. *The cul-de-sac shall provide a pedestrian connection between it and adjacent streets, access ways, parks, or other right-of-way. Such pedestrian ways shall conform to Section 16.64.030(C).*

Findings: Adjacent private property to the east prevents a pedestrian connection from the cul-de-sac.

- J. *Marginal Access Streets. Where a subdivision abuts or contains an existing or proposed arterial street, the commission may require marginal access streets, through lots with suitable depth, screen planting contained in a nonaccess reservation along the rear property line, or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.*

Findings: The proposed development does not abut or contain existing or proposed arterial streets.

- L. *Street Names. No street name shall be used which will duplicate or be confused with the name of existing streets except for extensions of existing streets. Street names and numbers shall conform to the established pattern in the city and the surrounding area and shall be subject to the approval of the commission.*

Findings: The proposed street names are logical and extend from abutting streets. Individual addresses are assigned by the city in accordance with Chapter 12.04 of the Canby Municipal Code. The applicant proposes "B Street" to be named NW 11th Place. **Condition #48** states that "NW 11th Place" shall be noted on the final plat and on all final construction plans. **Conditions #19-21** address street signage requirements.

M. Planting Easements. *The Planning Commission may require additional easements for planting street trees or shrubs.*

Findings: A 12 foot street tree easement along the frontages of all proposed parcels is recommended; this easement may be combined with other utility easements. The City has a newly updated Chapter 12.32, Tree Regulations, which specify tree spacing, planting, species selection, and establishment procedures. The Tree Regulations require the applicant pay a fee to the city based on the number of trees to be planted; then the City Arborist is responsible for the placement, planting, and establishment of the trees.

Therefore, as **Conditions # 57-58** state that the final plat shall show a 12 foot tree easement along all street frontages of all proposed parcels and the applicant shall pay the city fee for city establishment of street trees per the Tree Regulation standards in Chapter 12.32. This easement may be combined with other utility and sidewalk easements and shall be measured from the property boundary. All street tree fees shall be paid prior to the recordation of the final plat. The applicant is proposing curb-tight sidewalks along NW 12th, therefore, if the sidewalks along NW 12th are to be curb tight, then the above condition also applies the all parcels along NW 12th.

In addition, the applicant proposes a planter strip along the right-of-way for NW 10th Avenue. The applicant shall pay a fee to the city based on the number of trees to be planted along the planter strips along NW 10th Avenue prior to the recordation of the final plat.

N. Grades and Curbs. *Grades shall not exceed seven percent on arterials, ten percent on collector streets, or fifteen percent on any other street. In flat areas allowance shall be made for finished street grades having a minimum slope of .5 percent. Centerline radii of curves shall not be less than three hundred feet on major arterials, two hundred feet on secondary arterials, or one hundred feet on other streets, unless specifically approved by the City, and shall be to an even ten feet.*

Findings: The applicant shall submit grading and erosion control plans for approval by Canby Public Works prior to the construction of public improvements. In addition, if applicable, a 1200c erosion control permit shall be obtained from DEQ; if DEQ does not require a 1200c permit the applicant shall submit documentation from DEQ stating that a 1200c permit is not required-see **Condition #8**.

Phase I has had issues with the grading on parcels being uneven and neighbor house elevations being uneven. Therefore, staff proposes a condition requiring that the applicant grade all areas of the site, including the proposed lots, to a height within one foot of the house foundation ground elevation. Grading of all proposed roads shall follow the natural topography and shall preserve the natural features of the site as much as possible (**Condition #7**).

In addition, the homebuilder is required to obtain a city erosion control permit at the time of home construction (**Condition #67**).

16.64.015 Access

B. All proposed roads shall follow the natural topography and preserve natural features of the site as much as possible. Alignments shall be planned to minimize grading.

Findings: **Condition #7** addresses the above.

C. Access shall be properly placed in relation to sight distance, driveway spacing, and other related considerations, including opportunities for joint and cross access.

Findings: See 16.10.070 (B) for discussion on driveway standards. The applicant's narrative states that joint driveways are proposed for properties along Elm. Therefore the standards for joint and shared access driveways of 16.10 are applicable and will be verified for compliance during the building permit process.

D. The road system shall provide adequate access to buildings for residents, visitors, deliveries, emergency vehicles, and garbage collection.

Findings: This proposed subdivision design was routed to Canby Fire District and Canby Disposal for comment. Canby Fire District stated that roadways need a 20 foot clear aisle. See 16.64.010(A)(3) for more discussion of streets and 16.46.010(A)(1) for discussion on parking restrictions.

E. Streets shall have sidewalks on both sides. Pedestrian linkages should also be provided to the peripheral street system.

Findings: All streets have sidewalks proposed. See discussion under 16.64.010(A)(3).

F. Access shall be consistent with the access management standards adopted in the Transportation System Plan.

Findings: See discussion under 16.64.010(A)(3). The traffic study did not report any access issues. New driveways and accesses are verified for compliance with Chapter 16 during the building permit process and/or with a Street Opening Permit.

16.64.020 Blocks.

A. Generally. The lengths, widths and shapes of blocks shall be designed with due regard to providing adequate building sites suitable to the special needs of the type of use contemplated, needs for access, circulation, control and safety of street traffic and limitations and opportunities of topography.

Findings: Lots sizes conform to the standards of the R-1 Zone. The traffic study did not report any in access, circulation, control, or safety concerns. See below for discussion on block sizes and lengths.

A. Sizes. Block length shall be limited to 300 feet in the C-1 zone, 400 feet in residential zones, 600 feet in all other zones, except for 1,000 feet on arterials. Exceptions to this prescribed block standard shall be permitted where topography, barriers such as railroads or arterial roads, or environmental constraints prevent street extension. The block depth shall be sufficient to provide two lot depths appropriate to the sizes required by Division III.

Findings: The proposed blocks, as specified in the “Northwoods Estates Conceptual Plat Phases I,II,II & IV”, and in the master plan, “Northwood Estates, Canby, OR, Conceptual Development Plan”, do not all conform to the above 400 foot maximum block length. All lot depths accommodate two or more lots.

According to the Development Agreement dated 1/11/07, this subdivision application shall be bound to this master plan. This conceptual plan does not specify block lengths but does specify lot areas; the applicant likely is proposing block lengths that accommodate the proposed lot areas.

Considering only the proposed streets for Phase II:

- 10th Avenue between Douglas and Elm is over 400’.
- The western half of NW 10th will be over 400’ when existing adjacent properties are included.
- The western half of NW 12th will be over 600’ when existing adjacent properties are included.
- The eastern half of NW 12th will be about 400’ when existing adjacent properties are included but the exact length is not noted on the submitted plans.
- NW 11th Avenue between Douglas and Elm will be a little over 400’.
- The eastern half of NW 10th will be a little over 400’ when existing adjacent properties are included but the exact length is not noted on the submitted plans.

16.64.030 Easements

A. Utility Lines. Easements for electric lines or other public utilities are required, subject to the recommendations of the utility providing agency. Utility easements twelve feet in width shall be required along all street lot lines unless specifically waived. The commission may also require utility easements alongside or rear lot lines when required for utility provision. The construction of buildings or other improvements on such easements shall not be permitted unless specifically allowed by the affected utility providing agency.

Findings: Condition #54 states that the city will require a 12 foot easement along all of the lot’s street frontages; additional agency requirements are addressed with **Conditions 2, 3, & 45**. Canby Utility may require additional water line easements and any additional easements required by Canby Utility shall be noted on the final plat-see **Condition #55**.

C. Pedestrian Ways. In any block over six hundred feet in length, a pedestrian way or combination pedestrian way and utility easement shall be provided through the middle of the block. If unusual conditions require blocks longer than one thousand two hundred feet, two pedestrian ways may be required. When essential for public convenience, such ways may be required to connect to cul-de-sacs, or between streets and other public or semipublic lands or through green way systems. Sidewalks to city standards may be

required in easements where insufficient right-of-way exists for the full street surface and the sidewalk. All pedestrian ways shall address the following standards to provide for the safety of users:

Findings: Considering only the proposed streets for Phase II, the western half of NW 12th will be over 600' when existing adjacent properties are included. No pedestrian ways are proposed along NW 12th.

According to the Development Agreement dated 1/11/07, this subdivision application shall be bound to this master plan. This conceptual plan does not specify pedestrian ways.

The block length of existing adjacent properties exceeds 600' and the argument can be made that this development is not the cause of the long block length. An ideal location for a pedestrian connection would be approximately half way between the block, which would be on an existing property and difficult to obtain.

1. Length should be kept to a minimum and normally not in excess of two hundred feet;
2. Width should be maximized and shall not be below ten feet. For pathways over one hundred feet long, pathway width shall increase above the minimum by one foot for every twenty feet of length;
3. A minimum of three foot-candles illumination shall be provided. Lighting shall minimize glare on adjacent uses consistent with the outdoor lighting provisions in section 16.43 of this code;
4. Landscaping, grade differences, and other obstructions should not hinder visibility into the pedestrian way from adjacent streets and properties. Fencing along public pedestrian ways shall conform with the standards in Section 16.08.110;
5. Surrounding land uses should be designed to provide surveillance opportunities from those uses into the pedestrian way, such as with the placement of windows;
6. Exits shall be designed to maximize safety of users and traffic on adjacent streets; and
7. Use of permeable surfacing materials for pedestrian ways and sidewalks is encouraged whenever site and soil conditions make permeable surfacing feasible. Permeable surfacing includes, but is not limited to: paving blocks, turf block, pervious concrete, and porous asphalt. All permeable surfacing shall be designed, constructed, and maintained in accordance with the Canby Public Works Design Standards and the manufacturer's recommendations. Maintenance of permeable surfacing materials located on private property are the responsibility of the property owner.

Findings: No pedestrian ways are proposed along NW 12th; see discussion above.

16.64.040 Lots

- A. Size and Shape.** The lot size, width, shape and orientation shall be appropriate for the location of the subdivision and for the type of development and use contemplated. To provide for proper site design and prevent the creation of irregularly shaped parcels, the depth of any lot or parcel shall not exceed three times its width (or four times its width in rural areas) unless there is a topographical or environmental constraint or an existing man-made feature such as a railroad line.

Findings: See discussion of lot sizes under 16.16 R-1 Zone. No proposed lot depths exceed three times the width.

B. Minimum Lot Sizes:

1. Lot sizes shall conform with requirements of Division III unless the applicant chooses to use an alternative lot layout per subsection (3) below to accommodate interconnected and continuous open space and or other natural resources. In this case, the average minimum lot size may be reduced by 5,000 square feet after subtracting access tracts. Overall development densities shall comply with the underlying maximum density allowed by the zone.

Findings: See discussion of lot sizes under 16.16 R-1 Zone. No alternative lot layouts are proposed.

- C. Lot Frontage.** All lots shall meet the requirements specified in Division III for frontage on a public street, except that the Planning Commission may allow the creation of flag lots, cul-de-sac lots and other such unique designs upon findings that access and building areas are adequate. Lots that front on more than one major street shall be required to locate motor vehicle accesses on the street with the lower functional classification.

Findings: See discussion of lot sizes under 16.16 R-1 Zone. The applicant is proposing cul-de-sac lots for lots 51-54 with less than the required street frontages. Some lots also have curved edges but all proposed lots meet the minimum lot size of the R-1 Zone and provide adequate access. Lots 70 and 71 front a local street (Douglas) and a neighborhood collector/neighborhood route (NW 10th). Customarily, the above provision is only applied to arterials and collector roads. The Planning Commission should consider if lots 70 and 71 should only take access off Douglas, a lower street classification than NW 10th Avenue. **Condition #76**, a condition from SUB 05-12, states that lots 57 and 67 shall have access off NW 10th Avenue only, which is in conflict with the above standard. This condition was ordered to help prevent conflicts on the one way sections of Elm adjacent to the park strip. All other lots for Phase II front one or more local streets or exclusively NW 10th.

- D. Double Frontage.** Double frontage or through lots should be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation.

Findings: No double frontage lots are proposed.

- E. Lot Side Lines.** The side lines of lots shall run at right angles to the street upon which the lots face, or on curved streets they shall be radial to the curve, unless there is some recognizable advantage to a different design.

Findings: Side lot lines appear to mostly be at right angles to the streets the lots face except for lots 62/63 and cul-de-sac lots 51-54. Lots 44, 45, 47, 48, 50, 56, 57, 64, 66, and 67 have portions of side lot lines that are at angles in order to fit in the street pattern.

F. Resubdivision. In subdividing tracts into large lots which at some future time are likely to be resubdivided, the location of lot lines and other details of the layout shall be such that resubdivision may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of building locations in relationship to future street rights-of-way shall be made a matter of record if the commission considers it necessary.

Findings: No future resubdivision of lots is expected.

G. Building Lines. If special building setback lines are to be established in the subdivision plat, they shall be shown on the subdivision plat or included in the deed restrictions. This includes lots where common wall construction is to be permitted between two single-family dwellings.

Findings: No special building setback lines are proposed.

J. Designation of Lots as 'Infill Home' Sites. The Planning Commission may require that homes built on one or more lots adjacent to existing development be subject to any or all of the requirements of 16.21.050 - Infill Homes. Furthermore, for subdivisions where the parent parcel(s) is less than two acres in size, the Planning Commission may require that all homes built on lots in the subdivision be subject to any or all of the requirements of 16.21.050. These requirements are to be shown on the subdivision plat or included in the deed restrictions.

Findings: See discussion of infill lots under 16.21.050 and **Condition #53 & 73**. Lots 42, 52, 54, 59, 60, 74 are determined to be infill lots and shall be noted as "Infill lots subject to the infill lot standards of 16.21".

16.64.050 Parks and recreation.

Subdivisions shall meet the requirements for park, open space and recreation as specified in Division VI.

Findings: Refer to the discussion under 16.120.

16.64.060 Grading of building sites.

The commission may impose bonding requirements, similar to those described in section 16.64.070, for the purpose of ensuring that grading work will create no public hazard nor endanger public facilities where either steep slopes or unstable soil conditions are known to exist.

Findings: Staff does not propose a grading bond because the site has flat topography with no steep slopes with little possibility for issues.

16.64.070 Improvements

A. Improvement Procedures. In addition to other requirements, improvements installed by a land divider either as a requirement of these regulations, or at his own option, shall conform to the requirements of these regulations and improvement standards and

specifications followed by the city, and shall be installed in accordance with the following procedure:

1. Improvement work shall not be commenced until plans have been checked for adequacy and approved by the city. To the extent necessary for evaluation of the proposal, the plans may be required before approval of the tentative plat of a subdivision or partition. No work shall commence until the developer has signed the necessary certificates and paid the subdivision development fees specified elsewhere in this division.
2. Improvement work shall not commence until after the city is notified, and if work is discontinued for any reason it shall not be resumed until after the city is notified.
3. Improvements shall be constructed under the inspection and to the satisfaction of the City. The city may require changes in typical sections and details in the public interest if unusual conditions arise during construction which warrant the change.
4. Underground utilities, sanitary sewers and storm drains installed in streets shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed to a length obviating the necessity for disturbing the street improvements when service connections are made.

Findings: The applicant shall submit engineered plans of all public improvements, including: curbing and sidewalks; planter strips; streets; street lighting; street signage; street striping; park improvements; storm; sewer; electric; water/fire hydrants; cable; lot, street and perimeter monumentation; underground telephone lines; CATV lines; and natural gas lines (**Conditions #2-3**).

Per the findings made in the "Canby Northwoods Subdivision Phase 2&3 Traffic Assessment" memorandum from DKS dated 9/6/13, roadway striping should be in accordance with the MUTCD. In particular, roadway striping needs to be reviewed for the one way portions of N. Elm to differentiate travel directions on one ways (as stated at the pre-application conference). Gordon Munro, the consulting engineer assigned to review this proposal, also commented that the striping at the entrance and exit of the one-way couplet on Elm Street was of particular concern and needs to be reviewed prior to the public improvement stage of this project.

In addition, all public improvements must be in accordance with the Public Works Design Standards, the results of the traffic studies, and applicable agency standards. Per the findings made in the traffic study, roadway signage should be in accordance with the MUTCD. In addition, many requested design changes that were discussed at the pre-application meeting need to be addressed on the final public improvement plans in order for Public Works, the consulting city engineer, and applicable agencies to be able to approve the final plans prior to the construction of public improvements and/or prior to the approval of the final plat (**Conditions #2, 3, & 45**).

Prior to the start of any public improvement work, the applicant must schedule a pre-construction conference with the city and obtain sign-off from the consulting City Engineer for this proposal (Gordon Munro, Kennedy/Jenks Consultants), applicable Canby Public Works personnel, and from other applicable agencies (**Conditions #2-3**). Sanitary system and storm drainage plans shall be approved by DEQ prior to the construction of public improvements. Gordon Munro's comments in the memorandum

dated 2.6.14 have been incorporated into this staff report and **Condition #4** states that the applicant shall address all comments made in his 2.6.14 memorandum prior to the construction of public improvements.

The Canby Parks Department and the Canby Parks and Recreation Board shall approve all park improvement plans prior to the start of construction. The applicant shall receive approval of proposed park plans by the Canby Parks Department and the Canby Parks Board prior to the construction of public improvements and prior to the City Council acceptance of the proposed park dedication; see **Conditions # 30, 31, 59, & 60** conditions regarding parks.

All public improvements must be installed prior to the recordation of the final plat. Alternatively, if the applicant wishes to forgo construction of public improvements until after the recordation of the final plat, then the applicant shall pay a bond in accordance with 16.64.070(N-P) to the city as assurance.

A separate final plat application is required for review and approval prior to execution and filing of record. Prior to the recordation of the final plat, the city will route the plat to applicable agencies for comment; the city will not approve the final plat until the requirements of all city departments and agencies are met.

Note: Installation of sidewalks is customarily not required until homes are built on their respective lots and is permitted by 16.64.070(G); curbing is normally installed by the developer. **Condition #77** states that all sidewalks fronting house lots shall be installed on their respective lots at the time of home construction. See 16.64.010(A)(3) for more discussion on sidewalks.

5. A map showing public improvements "as built" shall be filed with the city engineer within sixty days of the completion of the improvements.

Findings: Condition #49 states that all "as built" of public improvements, including: curbing and sidewalks; planter strips; streets; street lighting; street signage; street striping; park improvements; storm; sewer; electric; water/fire hydrants; cable; lot, street and perimeter monumentation; underground telephone lines; CATV lines; and natural gas lines, shall be filed at Canby Public Works and Canby Planning within sixty days of the completion of improvements and prior to the recordation of the final plat.

B. The following improvements shall be installed at the expense of the subdivider unless specifically exempted by the Planning Commission:

- 1. Streets, including drainage and street trees;**
- 2. Complete sanitary sewer system;**
- 3. Water distribution lines and fire hydrants;**
- 4. Sidewalks and any special pedestrian ways;**
- 5. Street name and traffic-control signs;**
- 6. Streetlights;**
- 7. Lot, street and perimeter monumentation;**
- 8. Underground power lines and related facilities;**
- 9. Underground telephone lines, CATV lines, natural gas lines, and related facilities;**

Findings: See the discussion above and Conditions 2, 3, &45.

The applicant proposes to maintain the existing overhead lines along 10th Avenue and underground lines in the remainder of the development.

Monumentation requirements are addressed in Conditions #61-64.

10. *Where dedicated or undedicated open space is proposed or provided, it shall be the subdivider's responsibility to provide standard public improvements to and through that open space.*

Findings: The applicant proposes to dedicate open space. The Planning Commission is welcome to give input on the park's design. Planning staff thinks two rows of trees on either side of the boulevard strip with a middle meandering sidewalk would create a pleasant street canopy and the center sidewalk or pathway would provide a location to install park benches where the open space and shade of the trees could be enjoyed; any pedestrian paths should align with the surrounding sidewalk layouts. If little public opinion is received for the proposed park design, then the Canby Parks Department will be the primary designer; the preliminary park design in your packet has received modification requests from the Canby Parks Department.

Some of the comments from the Parks Department include:

- Provide 5-foot sidewalk around the park
- Provide a driveway entrance and parking area for maintenance in the park
- Provide an electrical service and a water service stub
- Do not include concrete sidewalks across the park,
- Do not include utility valves in the park
- Put all irrigation valves in one location,
- Do not provide lights
- Provide a row of tree in the middle of the strip at 40-foot intervals alternating between crimson king maple and autumn purple ash
- Provide a trash receptacle and pet waste dispenser.

The Canby Parks and Recreation Board and the Canby Parks Department shall approve all park improvement plans prior to the start of construction of park improvements. In addition, the Canby City Council shall be required to formally accept the proposed park dedication prior to the start of the construction of park improvements. The applicant shall obtain approval of park improvement plans from the Canby Parks Department and the Canby Parks and Recreation Board prior to City Council acceptance of the proposed dedication. See Conditions #30-31.

See 16.120 for more discussion of park improvements.

11. *If fencing is being proposed as part of subdivision development, the subdivider shall be responsible for installing fencing along public streets and pedestrian ways. Fencing shall be constructed in accordance with the standards in Section 16.08.10*

Findings: The submitted plans do not show any proposed fencing.

C. Streets.

1. All streets, including alleys, within the subdivision and streets adjoining, but only partially within the subdivision shall be improved.

Findings: All streets within and adjacent to the subdivision are proposed to be improved.

2. All public and private streets shall be constructed to city standards for permanent street and alley construction. LID alternatives, such as permeable surfacing and integrated stormwater management facilities, are required where site and soil conditions make it a feasible alternative. Upon completion of the street improvement, monuments shall be reestablished and protected in monument boxes at every street intersection and all points of curvature and points of tangency of street centerlines as required by Oregon Revised Statutes Chapter 92.

Findings: Conditions #2, 3, & 16-29 address street improvements, **Condition #42** addresses approval of any proposed pervious pavement; the applicant proposes pervious pavement along NW 10th Avenue.

Monumentation requirements are addressed in **Conditions #61-64**. Per above, monuments shall be reestablished and protected in monument boxes at every street intersection and all points of curvature and points of tangency of street centerlines as required by Oregon Revised Statutes Chapter 92.

3. **Street Trees.** Street trees shall be provided consistent with the provisions of Chapter 12.32.

Findings: Conditions #57-58 address the standard above.

4. Prior to city approval of the final subdivision plat, all perimeter and back lot line monumentation shall be installed and the installation of the front lot monumentation (along and within street rights-of-way) shall be guaranteed. Any monuments destroyed during improvement installation shall be replaced at the developer's expense.

Findings: Monumentation requirements are addressed in **Conditions 61-64**; per above, monumentation shall be installed and the installation of the front lot monumentation (along and within street rights-of-way) shall be guaranteed. Any monuments destroyed during improvement installation shall be replaced at the developer's expense.

5. If any lot abuts a street right-of-way that does not conform to the design specifications of this ordinance, the owner may be required to dedicate up to one-half of the total right-of-way width required by this ordinance.

Findings: The above provision is not applicable to any of the proposed lots.

6. The proposed use shall not impose an undue burden on the transportation system. The City may require the applicant to provide adequate information, such as a traffic impact

study, to demonstrate the level of impact to the surrounding street system. The developer shall be required to mitigate impacts attributable to the project.

7. The determination of impact or effect and the scope of the impact study should be coordinated with the provider of the affected transportation facility.

Findings: A traffic study was required and conducted. See 16.08.150 for discussion of traffic-related concerns and the recommendations of the traffic study and traffic calming/SDC credits.

8. Dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or access ways shall be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use.
9. Improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, access ways, paths, or streets that serve the proposed use where the existing transportation system may be burdened by the proposed use.

Findings: The proposed streets shall all be public streets/public right of way. Streets are dedicated by the depiction of lot boundaries on the final plat; the county delineates the boundaries of streets/right of ways when the plat is recorded. **Conditions 2, 3, & 45** address public improvement requirements.

D. Surface Drainage and Storm Sewer System.

1. Drainage facilities shall be provided within the subdivision and to connect the subdivision to drainage ways or storm sewers outside the subdivision, if necessary, as determined by the City.
2. Stormwater Management through Low Impact Development (LID). Low impact development is a stormwater management approach aimed at emulating predevelopment hydrologic conditions using a combination of site design and stormwater integrated management practices. This approach focuses on minimizing impervious surfaces, promoting rainfall evaporation and uptake by plants, and maximizing stormwater infiltration. Specific LID strategies and integrated management practices include:
 - a. Protection and restoration of native vegetation and soils,
 - b. Minimizing impervious surface area through use of pervious materials (e.g. pavers and pervious concrete).
 - c. Vegetated roofs,
 - d. Rainfall reuse,
 - e. Stormwater dispersion and bioretention (recharge).
3. All new subdivisions in Canby are required to treat stormwater on site. Stormwater management using LID practices is required where feasible, pursuant to requirements of this chapter and other applicable sections of this code. LID facilities shall be constructed in accordance with Canby Public Works Design Standards.

Findings: The applicant submitted a letter from DEQ dated 2.6.07 approving the use of the proposed drywells (UICs), sedimentation manholes, and bioswales/trenchdrains for all Northwoods phases. The applicant also turned in a drainage report dated 10.6.06 that addressed all phases of Northwoods. In the applicant's letters dated 1.4.14 and 1.17.14 and as

discussed at the pre-application meeting, the applicant has plans to install pervious pavement instead of the bioswales/trenches on NW 10th Avenue. The submitted stormwater plans and stormwater report do not indicate the changes in plans. **Conditions #40-41** state that the applicant shall submit revised storm plans and a revised storm report that includes any proposed stormwater design changes.

All final stormwater plans and reports must be approved by the consulting City Engineer for this proposal (Gordon Munro, Kennedy/Jenks Consultants), and by DEQ. The applicant must schedule a pre-construction conference with the city and obtain sign-off on stormwater plans by the consulting City Engineer for this proposal (Gordon Munro, Kennedy/Jenks Consultants), applicable Canby Public Works personnel, DEQ, and from other applicable agencies -see **Conditions #39-44**.

4. A conceptual stormwater management report must be submitted with the subdivision application. The report must demonstrate how and where stormwater will be managed on site at the subdivision. Where LID practices are not used, the applicant must demonstrate why LID is not feasible. The report will be reviewed by the Canby Public Works Department and shall be consistent with the Public Works Design Standards. Generally, the stormwater management plan must include the following:
 - a. A description of existing conditions including a map;
 - b. A description of the proposed stormwater system including a map;
 - c. An estimate of existing storm water run off;
 - d. An estimate of proposed storm water run off;
 - e. The detention/retention requirements; and
 - f. The discharge location, treatment method and sizing, and if discharging to the ground, the expected infiltration rates based upon soils mapping data.

Findings: The applicant turned in a drainage report dated 10.6.06 that addressed all phases of Northwoods. However, this drainage report does not address the proposed changes, applicant needs to turn in a modified report.

All stormwater plans and reports must be approved by the consulting City Engineer for this proposal (Gordon Munro, Kennedy/Jenks Consultants) and by DEQ. The applicant must schedule a pre-construction conference with the city and obtain sign-off on stormwater plans by the consulting City Engineer for this proposal (Gordon Munro, Kennedy/Jenks Consultants), and DEQ-see **Conditions #39-44**.

5. Responsibility for maintenance of LID facilities shall be as follows:
 - a. The Canby Public Works Department shall be responsible for maintaining all LID facilities located within the public right-of-way, and for providing for the safety of the public as related to LID facilities,
 - b. Private property owners shall be responsible for maintaining all LID facilities on their property. The city reserves the right to inspect such facilities at any time. Upon written notice by the city to the owner that the facility has been compromised to the point where the design capacity is no longer available or the facility is not functioning as designed and approved, the owner shall correct the problem. If the

owner fails to respond to the written notice within 15 days, the city may undertake the work and bill all time and material to the owner.

- c. For LID facilities that are not located in the public right-of-way and serve multiple private residential properties, a public easement for the LID facility shall be established and the Canby Public Works Department shall be responsible for maintenance of the facility. All property owners served by the facility shall pay a stormwater maintenance fee to the city to cover the cost of maintenance of the facility.

Findings: All proposed LID facilities will be in the public right of way and will be owned and maintained by the City of Canby. Any LID facilities constructed on private property shall be the responsibility of the property owner, unless the facility serves multiple private residential properties in which case a public drainage easement for the facility shall be established and property owners served by the facility shall pay a storm water maintenance fee.

- E. Sanitary Sewers. Sanitary sewers shall be installed to serve the subdivision and to connect the subdivision to existing mains. In the event it is impractical to connect the subdivision to the city sewer system, the commission may authorize the use of septic tanks if lot areas are adequate, considering the physical characteristics of the area. The commission may require the subdivider to install and seal sewer lines to allow for future connection to the city system.

Findings: The applicant will be connecting to the public sanitary sewer system. Sanitary plans must be approved by the city and DEQ prior to their construction. See **Conditions #34-38**.

- F. Water System. Water lines and fire hydrants serving the subdivision and connecting the subdivision to city mains shall be installed to the satisfaction of the supervisor of the water department and the Fire Marshal.

Findings: **Conditions #2, 3, 32-33, 45, & 55** address water system requirements and requires CUB and Canby Fire approval of water system plans, with Canby Fire focused on fire hydrant location and spacing.

- G. Sidewalks. Sidewalks shall be required on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of identified arterials, or industrial districts, the commission may approve a subdivision without sidewalks if alternative pedestrian routes are available. Sidewalk construction may be postponed until the actual construction of buildings on the lots, provided that adequate assurance is given that such sidewalks will be installed. Where LID practices are implemented in subdivision street design, alternative sidewalk design may be permitted with the approval from the city. Alternative sidewalk design resulting from LID best management practices may include, but are not limited to: flat curbs, LID bioretention areas incorporated in conjunction with required landscaping, and alternative sidewalk widths. LID best management practices shall be designed in accordance with the Canby Public Works Design Standards.

Findings: See the sidewalk installation discussion under 16.64.070(A). It has been Canby's practice to forgo sidewalk construction on home lots until the time of home construction; no assurances have customarily been collected, relying on final inspections before allowing occupancy.

H. Bicycle Routes. *If appropriate to the extension of a system of bicycle routes, existing or planned, the commission may require the installation of bicycle lanes within streets or the construction of separate bicycle paths.*

Findings: No bicycle lanes are adjacent to the proposed development and no new lanes are proposed or called for in the TSP. Additionally, the traffic study did not recommend any bike and pedestrian circulation improvements. The Final Findings, Conclusions, & Final Order for SUB 05-12 state in Condition #33 that shared (not striped) bike lanes are required on NW 10th Avenue. **Condition #29** re-states this condition for general knowledge.

I. Street Name Signs. *Street name signs shall be installed at all intersections according to city standards or deposit made with the city of an amount equal to the cost of installation.*

Findings: Condition #19-21 address approval of a street signage plan. The applicant shall be responsible for installing all required street signage, including street name signs, at the time of construction and installation of public improvements. Staff would prefer not to coordinate a street sign deposit arrangement with the applicant for administrative logistics reasons. We have asked public works to share their preference so we can place their preference in the condition of approval.

J. Street Lighting System. *Streetlights shall be required to the satisfaction of the manager of the Canby Utility Board.*

Findings: Conditions 2, 3, & 45 require approval of all public improvement plans by CUB.

K. Other Improvements.

1. *Curb cuts and driveway installation are not required of the subdivider but, if installed, shall be according to city standards.*

Findings: No curb cuts or driveways are proposed or shown on the submitted plans. **Condition #11** states that the applicant must obtain a city Street Opening Permit if the applicant wishes in install curb cuts and driveways so that the city may verify compliance with city access spacing standards. Otherwise, driveway spacing will be verified for compliance during the building permit process.

2. *Street tree planting is required of the subdivider and shall be according to city requirements.*

Findings: Conditions #57-58 address street tree requirements.

3. *The developer shall make necessary arrangements with utility companies or other persons or corporations affected, for the installation of underground lines and facilities.*

Electrical lines and other wires, including but not limited to communication, street lighting and cable television, shall be placed underground, unless overhead installation has been specifically approved by the commission because of unique circumstances at the site.

Findings: The applicant proposes overhead lines along 10th Avenue and underground lines in the remainder of the development. Overhead lines are to remain along 10th Avenue for cost-efficiency purposes and under the advice of Canby Utility due to the high voltage line the existing poles carry.

- 4. Developments along existing rail lines may be required to provide barrier fences or walls if necessary ensure safety for development occupants. City may also require noise mitigation such as sound walls, or triple-pane windows in order to reduce the health impacts of train noises. Noise mitigation requirements shall be based on measured db levels when trains are in the vicinity and specific building construction features.*

Findings: The proposal is not adjacent to a rail line.

M. Survey Accuracy and Requirements. *In addition to meeting the requirements as set forth in Oregon Revised Statutes relative to required lot, street and perimeter monumentation, the following shall be required:*

- 1. An accuracy ratio of subdivision plat boundary line closure of one in ten thousand (.0001) feet as found in the field.*
- 2. Two primary perimeter monuments (one of which can be the initial point) having the same physical characteristics as the initial point. The monuments are to be on a common line visible, if possible, one to the other at time of approval and preferably at angle points in the perimeter. They shall be points as far apart as practicable. A survey monument witness sign of a design acceptable to the city engineer shall be placed within eighteen inches of both monuments. The position for the initial point and other primary perimeter monuments shall be selected with due consideration to possible damage during construction and desirability of witness sign location.*
- 3. Street centerline monumentation shall consist of a two-inch diameter brass cap set in a concrete base within and separate from a standard monument box with cover (standard city details applicable) at locations specified by the city engineer (generally at intersections with centerline of arterial or collector streets and within streets proposed to be greatly extended into adjacent future subdivisions). All other street centerline points (intersections, points of tangent intersections, cul-de-sac center lines, cul-de-sac off-set points) shall be monumented with a five-eighths-inch diameter steel rod thirty inches long with an approved metal cap driven over the rod and set visible just below the finish surface of the street. If any points of tangent intersection fall outside of a paved section street, the above monumentation will be required at point of curvature and point of tangency of the curve. All centerline monuments are to be accurately placed after street construction is complete.*

Findings: Monumentation requirements are addresses in **Conditions #61-64**. The City Engineer or County surveyor shall verify that the above standards are met prior to the recordation of the subdivision plat.

N. Agreement for Improvements. Before commission approval of a subdivision plat or partition map, the land divider shall either install required improvements and repair existing streets and other public facilities damaged in the development of the property, or execute and file with the city engineer, an agreement specifying the period within which required improvements and repairs shall be completed and provided that, if the work is not completed within the period specified, the city may complete the work and recover the full cost and expense, together with court costs and reasonable attorney fees necessary to collect the amounts from the land divider. The agreement shall also provide for reimbursement to the city for the cost of inspection by the city which shall not exceed ten percent of the improvements to be installed.

O. Bond.

1. The land divider shall file with the agreement, to assure his full and faithful performance thereof, one of the following:

a. A surety bond executed by a surety company authorized to transact business in the state in a form approved by the City Attorney;

b. A personal bond cosigned by at least one additional person, together with evidence of financial responsibility and resources of those signing the bond, sufficient to provide reasonable assurance of ability to proceed in accordance with the agreement;

c. Cash.

2. Such assurance of full and faithful performance shall be for a sum approved by the city engineer as sufficient to cover the cost of the improvements and repairs, including related engineering and incidental expenses, and to cover the cost of the city inspection.

3. If the land divider fails to carry out provisions of the agreement and the city has unreimbursed costs or expenses resulting from such failure, the city shall call on the bond or cash deposit for reimbursement. If the cost of expense incurred by the city exceeds the amount of the bond or cash deposit, the land divider shall be liable to the city for the difference.

P. Guarantee. All improvements installed by the subdivider shall be guaranteed as to workmanship and materials for a period of one year following written notice of acceptance by the city to the developer.

Findings: The applicant shall be responsible for installing all public improvements prior to the recordation of the final plat. No public improvement work shall be commenced until it is approved by all applicable parties. Alternatively, **Conditions #12-13** state that if the applicant wishes to forgo construction of public improvements until after the recordation of the final plat, then the applicant shall file an agreement for improvements, pay a bond, and guarantee the improvement work in accordance with 16.64.070(N-P) above.

The applicant must guarantee all public improvement work with a maintenance bond in accordance with (P) above-see **Condition #14**.

R. No fence/wall shall be constructed throughout a subdivision where the effect or purpose is to wall said project off from the rest of the community unless reviewed and approved by the Planning Commission.

Findings: No fences or walls are proposed or shown on the submitted plans.

16.64.80 Low Impact Development Incentives

The purpose of this section is to encourage the use of certain low impact development (LID) practices in subdivision development beyond the minimum requirements of this code. The provisions in this section are voluntary and are not required of new subdivisions. These provisions are applicable only when an applicant elects to utilize the incentives provided in this section. Only one incentive is permitted at a time. For example, an applicant cannot utilize a height bonus and density bonus in the same subdivision application.

Findings: The applicant has not requested height or density bonuses.

16.68 Subdivision Final Procedures and Recordation

16.68.010 Responsibilities of applicant.

Following the action of the city in approving or conditionally approving a tentative plat for a subdivision, the applicant shall be responsible for the completion of all required improvements, or the posting of adequate assurances in lieu thereof, to the satisfaction of the city, prior to transfer of title of any of the lots involved.

Findings: Condition #46 addresses the above requirement.

16.68.020 Submittal of subdivision plat.

Within one year after approval of the tentative plat, the subdivider shall cause the subdivision or any part thereof to be surveyed and a plat prepared in conformance with the tentative plat, as approved. The subdivider shall submit the original hardboard drawing, a Mylar copy, and any supplementary information to the city. If the subdivider wishes to proceed with the subdivision after the expiration of the one-year period following the approval of the tentative plat, he must formally request an extension of time, in writing, stating the reasons therefore. The City shall review such requests and may, upon finding of good cause, allow a time extension of not more than six additional months, provided that the request for the time extension is properly filed before the end of the one-year approval period.

Findings: Clackamas County Surveying reviews pending subdivision plat documents for Oregon statutes and county requirements. The subdivision plat must be recorded at Clackamas County within one year of approval of the tentative plan or the applicant must request that the Planning Director approve a six month extension for recordation of the approved final plat. (Condition #51).

16.68.030 Information required on plat.

In addition to that required for the tentative plat or otherwise specified by law, the following information shall be shown on the plat:

- A. Date, north point and scale of drawing;
- B. Legal description of the tract boundaries;

- C. Name and address of the owner or owners, subdivider, engineer or surveyor, and land planner or landscape architect;
- D. Tract boundary lines, right-of-way lines of streets and lot lines with dimensions, bearings or deflection angles and radii, arcs, points or curvature and tangent bearings. All bearings and angles shall be shown to the nearest one second and all dimensions to the nearest 0.01 foot. If circular curves are proposed in the plat, the following data must be shown in tabulation form: curve radius, central angles, arc length, length and bearing of long chord. All information shown on the face of the plat shall be mathematically accurate;
- E. Easements denoted by fine dotted lines, clearly identified and, if already of record, their recorded reference. If an easement of record is not definitely located, a statement of the easement shall be given. The width of the easement, its length and bearing, and sufficient ties to locate the easement with respect to the subdivision shall be shown. If the easement is being dedicated by the map, it shall be properly referenced in the owner's certificates of dedication;
- F. Name and right-of-way width of each street or other designated rights-of-way;
- G. Any building setback lines, if more restrictive than otherwise required in Division III;
- H. Numbering of blocks consecutively within the subdivision and numbering of lots within each block;
- I. Location and purpose for which sites, other than residential lots, are dedicated or reserved;
- J. Easements and any other areas for public use dedicated without any reservation or restriction whatever;
- K. A copy of any deed restrictions written on the face of the plat or prepared to record with the plat with reference on the face of the plat;
- L. The following certificates which may be combined where appropriate:
 1. A certificate signed and acknowledged by all parties having any record title interest in the land, consenting to the preparation and recording of the plat,
 2. A certificate signed and acknowledged as above, dedicating all land intended for public use except land which is intended for the exclusive use of the lot owners in the subdivision, their licensees, visitors, tenants and servants.
 3. A certificate with the seal of, and signed by, the engineer or the surveyor responsible for the survey and final plat,
 4. Other certifications now or hereafter required by law;

Findings: Condition #47 states that the final plat must contain the information required in 16.68.030 above, including a copy of all deed restrictions referenced in the plat or prepared to be recorded with the plat.

- M. Where any portion of the platted area is subject to inundation in the event of a one-hundred-year flood, that area shall be clearly indicated on the final plat.

Findings: No areas of this proposal are within the 100 year floodplain.

16.68.040 Information to accompany plat.

The following data shall accompany the final plat:

- A. A preliminary title report issued by a title insurance company in the name of the owner of the land, showing all parties whose consent is necessary and their interest in the premises;

Findings: The county ensures all parties whose consent is necessary sign the final plat.

B. Sheets and drawings showing the following:

1. Traverse data including the coordinates of the boundary of the subdivision and ties to section corners and donation land claim corners, and showing the error of closing, if any,
2. The computation of distances, angles, and courses shown on the plat,
3. Ties to existing monuments, proposed monuments, adjacent subdivisions, street corners and state highway stationing;

Findings: Monumentation requirements are addressed in **Conditions #61-64**. The final plat must contain the information required in 16.68.040(B) above (**Condition #47**).

C. A copy of any deed restrictions applicable to the subdivision;

Findings: **Condition #47** addresses the above.

D. A copy of any dedication requiring separate documents;

Findings: See discussion under 16.64.070(C)(9) regarding street dedications; see discussion under 16.120 regarding park dedication.

E. A certificate by the city engineer that the subdivider has complied with the requirements for bonding or otherwise assured completion of required improvements; and

F. A certificate of the subdivider of the total cost or estimate of the total cost for the development of the subdivision in accordance with the provisions and requirements of this title or any other ordinance or regulation of the city relating to subdivision development. This certificate is to be accompanied by a final bid estimate of the subdivider's contractor, if there is a contractor engaged to perform the work, and the certificate of the total cost estimate must be first approved by the city engineer.

Findings: If the applicant chooses to pay a bond for some or all of the required public improvements, then a certificate from the designated city engineer for this proposal shall be obtained that states the requirements in (E) and (F) above. (**Condition #13**)

16.68.050 Technical plat review.

A. Upon receipt by the city, the plat and other data shall be reviewed to determine that the subdivision, as shown, is substantially the same as it appeared on the approved tentative plat and that there has been compliance with provisions of the law and of these regulations.

B. The City may make such checks in the field as are desirable to verify that the plat is sufficiently correct on the ground, and their representatives may enter the property for this purpose.

C. If the City determines that full conformity has not been made, the City shall advise the subdivider of the changes or additions that must be made and shall afford the subdivider an opportunity to make the changes or additions.

Findings: Condition #47 addresses the above requirements.

16.68.060 Planning Commission approval.

Approval of the plat shall be indicated by the signatures of the Planning Director or their designee. After the plat has been approved by all city and county officials, one reproducible copy of all data (plat face, dedications, certificates, approvals), one copy of all plat data in a "dxf" digital format, and one copy of recorded restrictive and protective covenants shall be returned to the City Planner.

16.68.070 Filing of final plat.

Approval of the plat by the city, as provided by this division, shall be conditioned on its prompt recording. The subdivider shall, without delay, submit the plat to the county assessor and the county governing body for signatures, as required by Oregon Revised Statutes Chapter 92. The plat shall be prepared as provided by Oregon Revised Statutes Chapter 92. Approval of the final plat shall be null and void if the plat is not recorded within six months of the date of the signature of the Planning Director.

Findings: Condition #50 addresses the above requirement. The city does not need a "dxf" format of the final plat.

16.86 Street Alignments

16.86.020 General provisions.

- A.** The Transportation System Plan shall be used to determine which streets are to be arterials, collectors, and neighborhood connectors. All new streets are required to comply with the roadway design standards provided in Chapter 7 of the TSP. The city may require right-of-way dedication and/or special setbacks as necessary to ensure adequate right-of-way is available to accommodate future road widening projects identified in the TSP.
- B.** Right-of-way widths and cross section standards for new streets shall be in conformance with the Canby Transportation System Plan and the Public Works Design Standards.

Findings: See discussion under 16.64.010(A)(3).

- C.** The Public Works Director shall be responsible for establishing and updating appropriate alignments for all streets.

Findings: The city engineer assigned to review this proposal is reviewing street alignments.

- D.** No building permit shall be issued for the construction of a new structure within the planned right-of-way of a new street, or the appropriate setback from such a street as established in Division III.
- E.** Existing structures which were legally established within a planned road alignment or abutting setback shall be regarded as nonconforming structures.

Findings: No structures are proposed in street alignments or roadways.

F. Bikeways and bike lanes shall be provided consistent with the Bicycle Plan element of the Transportation System Plan.

G. Pedestrian facilities shall be provided consistent with the Pedestrian Plan element of the Transportation System Plan.

Findings: No bicycle lanes are adjacent to the proposed development and no new lanes are proposed or called for in the TSP. Additionally, the traffic study did not recommend any bike and pedestrian circulation improvements. The Final Findings, Conclusions, & Final Order for SUB 05-12 state in Condition #33 that shared (not striped) bike lanes are required on NW 10th Avenue. **Condition #29** re-states this condition for general knowledge.

16.86.060 Street Connectivity

When developing the street network in Canby, the emphasis should be upon a connected continuous grid pattern of local, collector, and arterial streets rather than discontinuous curvilinear streets and cul-de-sacs. Deviation from this pattern of connected streets shall only be permitted in cases of extreme topographical challenges including excessive slopes (35 percent plus), hazard areas, steep drainage-ways and wetlands. In such cases, deviations may be allowed but the connected continuous pattern must be reestablished once the topographic challenge is passed.

Findings: See street connectivity discussion under 16.64.010(A)(1).

16.89 Application and Review Procedures

Findings: This application is being processed in accordance with Chapter 16.89. Notice of the public hearing was mailed to owners and residents of lots within 500 feet of the subject development and to applicable agencies. Notice of the meeting was posted at the Development Services Building and City Hall and was published in the *Canby Herald*. This chapter requires a Type III process for subdivisions. A neighborhood meeting is required and was held; minutes and a sign-in sheet from the meeting are part of the Planning Commission packet. In addition, a pre-application conference was held and the minutes of the pre-application meeting are part of the Planning Commission packet.

16.120 Parks, Open Space, and Recreation Land-General Provision

16.120.020 Minimum standard for park, open space and recreation land

A. Parkland Dedication: All new residential, commercial and industrial developments shall be required to provide park, open space and recreation sites to serve existing and future residents and employees of those developments.

- 1.** The required parkland shall be dedicated as a condition of approval for:
 - a.** Approval of a tentative plat of a subdivision or partition.

The following factors shall be utilized in the City's choice of whether to accept land or cash in lieu:

1. The topography, geology, public streets access to, parcel size, shape, and location of land in the development available for dedication;
2. Relationship of site to surrounding land uses and the surrounding transportation system;
3. Potential adverse/beneficial effects on environmentally sensitive areas;
4. Compatibility with the Park and Recreation Master Plan and Park and Open Space Acquisition Plan, Public Facilities element of the Comprehensive Plan, Transportation System Plan and the City of Canby Parks Capital Improvement Plan in effect at the time of dedication;
5. Opportunity for preservation of natural and historical features, scenic viewpoints, watershed environments, and sections of land for wildlife habitat.
6. Connections with, and continuity of, open space links, trails, and other major components of the open space system for parks.
7. Availability of previously acquired property;
8. Opportunity for shared use with other community facilities;
9. Opportunity for future expansion of the site; and
10. The feasibility of dedication.

Findings: The applicant is dedicating parkland. The city accepted the proposed dedication during the processing of Phase I, subdivision master planning, and in the Development Agreement. See discussion below.

3. Calculation of a Land Required: The total requirement of park, open space and recreational land shall be 0.01 of an acre per person based on the City standard of 10 acres of land per 1,000 residents. This standard represents the land-to-population ratio the City of Canby requires for city parks, and may be adjusted periodically through amendments to the Parks and Recreation Master Plan.
 - a. Population Formula: The following table of persons per unit shall be used in calculating the required dedication of acres of land:

Table 1
Persons per Dwelling Unit

Type of Unit	Total Persons Per Unit
Single Family Residential	2.7

- b. Determination of Resident Population: The projected resident population of the land to be subdivided or developed is determined by multiplying the maximum number of units allowed by the plat or the site plan by the appropriate number of standard of persons per unit set forth in Table 1 above. This figure is then to be multiplied by 0.01 to determine the total acreage that must be dedicated or deeded to the City for park, open space or recreation

$$(Maximum\ units) \times (persons/unit) \times 0.01\ (acreage\ to\ be\ dedicated)$$

Findings:

- For all phases, the applicant is proposing 110 single-family residences.
- $(110 \text{ units}) \times (2.7 \text{ persons/unit}) \times (0.01 \text{ acres/person}) = 2.97 \text{ acres}$ of parkland required for this proposal
- The Development Agreement and the application state that the applicant is proposing to dedicate 2.94 “gross” acres/2.32 “net” acres
- The city accepted the proposed dedication during the processing of Phase I, subdivision master planning, and in the Development Agreement.

16.120.030 Dedication procedures

When the final plat or site plan is approved, the developer shall dedicate the land as previously determined by the City in conjunction with approval of the tentative plat or site plan. Dedication of land in conjunction with multi-family development shall be required prior to issuance of permits and commencement of construction.

Findings: The final plat shall note that the park tract is conveyed to the City of Canby for public park use; the City Council must accept this park dedication prior to construction of park improvements. The applicant shall obtain approval of park improvement plans from the Canby Parks Department and the Canby Parks and Recreation Board prior to City Council acceptance of the proposed dedication-see **Conditions #30-31**.

Dedication of land or covenants approved as part of a preliminary plat or site plan approval may be given or provided when the final plat is presented for approval. The developer must clear, or fill and grade all parkland to be dedicated to the satisfaction of the City and shall cause a Level I Environmental Assessment, as referenced by Section 16.120.020 Minimum standards for park, open space, and recreation land of this Code, to be performed on all lands to be dedicated as part of the City’s construction plan approval for the plat.

Findings: The city has determined that a Level I Environmental Assessment is not necessary for the proposed park dedication because of its well-known farmland use history. No potentially hazardous uses have historically occurred on the proposed parkland.

A. *In addition to a formal dedication on the plat or site plan to be recorded, the subdivider shall convey the required lands to the City by general warranty deed. The developer of a multi-family development or manufactured home park shall deed the lands required to be dedicated by a general warranty deed. In any of the above situations, the land so dedicated and deeded shall not be subject to any reservations of record, encumbrances of any kind or easement which, in the opinion of the Planning Director, will interfere with the use of the land for park, open space or recreational purposes.*

If any questions exist as the presence of any reservation, encumbrances or easements, the subdivider or developer may be required to present to the City a title insurance policy on the subject property ensuring the marketable state of the title.

Findings: The code states above that the city wants a clear title on land dedicated to them; the county assures a clear title before plats are recorded. Per above, the applicant shall convey the proposed park dedication in a general warranty deed-see **Condition #60**.

16.120.040 Cash in lieu of dedication of land

In no case shall land dedication requirements be in excess of 15 percent of the gross land area of the development without the agreement of the developer. The decision of whether land is acceptable for use by the public for park and recreation purposes is to be made by the City Planning Commission based on the findings and planning set forth in the Canby Park and Recreation Master Plan and Acquisition Plan. Formal acceptance of parks and recreation lands required to be dedicated shall be by the City Council following any land use hearing and recommendation by the City Planning Commission. In all cases, except for PUD's, actual dedication of land shall occur prior to final plat sign-off. Dedication of land in the case of a PUD shall occur, by separate instrument, prior to commencement of construction of the project.

If land proposed for dedication to the public does not meet the criteria set forth in the Canby Park and Open Space Acquisition Plan, then at the option of the city, a park system development charge shall be required. Once calculated, the dedication of land shall remain the same, and not change, unless the original plans are altered.

Findings: Per the Development Agreement, no park SDCs will be charged for this development because the applicant is dedicating park land. The city accepted the proposed dedication during the processing of Phase I, subdivision master planning, and in the Development Agreement. Per above, the Canby City Council shall be required to formally accept the proposed park dedication; this formal acceptance shall be made prior to the start of park improvement construction (**Conditions #30-31**).

- A.** *Procedures for Land Dedication. Development applications shall include a scaled plan which identifies the sites proposed to be dedicated as park land. Parkland and recreational sites shall be clearly and accurately depicted on the final plat map and documented in the tax lot files. All phased residential subdivisions and planned unit developments shall show any proposed parkland for dedication on the overall master plan plat for the proposed development in addition to other anticipated public facilities. Such master plan as finally approved and accepted by the Planning Commission is considered binding on all future phases. Any requests by the developer to change parkland dedication for future phases must be brought back to the Commission for approval. In case of phased development where separate plats are recorded, land dedication shall occur prior to final platting of forty percent of the gross land area.*

Findings: The county assigns tax lot numbers and documents dedicated land in their tax lot files when plats are recorded. The city accepted the proposed dedication during the processing of Phase I, subdivision master planning, and in the Development Agreement. All parkland dedications for Northwoods will be recorded with Phase II; Phase III and IV do not have parkland dedications.

Tentative approval of parkland boundaries shall be made by the hearing body at the time of the public hearing on the development proposal. All sites shall be dedicated in a condition ready for full service including electrical, water, sewer and streets as is applicable to the location of the site or as necessary infrastructure and/or improvements to adjacent sites can be made at the discretion of the city. In case of phased development,

sites may be improved as each phased is developed rather than at the time of original dedication. An environmental audit sufficient to meet DEQ requirements shall be required on all parkland proposed to be dedicated to the city prior to acceptance. The cost of such an audit shall be split equally between the city and the developer.

Findings: The city has determined that a DEQ audit is not necessary for the proposed park dedication because of its well-known farmland use history. No potentially hazardous uses have historically occurred on the proposed parkland. **Conditions #30-31** ensure the proposed park dedication is dedicated in a condition ready for full service and approved by applicable persons; the final plat will not be approved until all park improvements are made or until adequate assurances are made to the city.

All lands dedicated to the city for parkland and recreational space shall be conveyed to the city either by warranty deed or be depicted on the final recorded plat as so dedicated. The conveyer shall be responsible for payment of all title searches, real estate taxes, and recording fees at the time of conveyance.

Findings: The county ensures a clear title before plats are recorded.

B. Options for Meeting System Development Charge Requirements. Any land proposed or required for parkland dedication, including improvements thereon, shall be appraised at its fair market value at the time it is dedicated to the city. The cost of the appraisal shall be divided equally between the developer and the city. This value of the property shall be credited toward the system development charge calculated for the development with the difference being the cash owed the System Development Improvement Fund. In no case may the city require more land of the developer than would be required if the entire amount of the system development charge was paid in cash. Similarly, no developer may dedicate parkland above the valuation required by the system development charge so that the city would be required to refund money to the developer unless mutually agreed upon by the city and developer.

Findings: The city accepted the proposed dedication during the processing of Phase I, subdivision master planning, and in the Development Agreement. Per the Development Agreement, no park SDCs will be charged for this development.

16.120.070 Minimum standards for open space

A. Purpose: Areas unsuitable or undesirable for development, including, but not limited to, areas containing drainageways, floodplains, identified steep slopes, significant natural features or other environmentally sensitive land may be set aside as permanent open space. No more than 25% of the required parkland dedication shall be within an identified flood plain or on an identified steep slope. The following procedures shall apply:

Findings: The applicant is not proposing to dedicate open space as defined above.

V. **PUBLIC TESTIMONY**

Notice of this application and opportunity to provide comment was mailed to owners and residents of lots within 500 feet of the subject properties and to all applicable public agencies. All citizen and agency comments/written testimony will be presented to the Planning Commission.

VI. **CONDITIONS OF APPROVAL**

Staff concludes, with conditions, that the application will meet the requirements for approval. Some conditions of approval from Northwoods Phase I, file #SUB 05-12, are also applicable to this Phase II application; relevant conditions from SUB 05-12 are listed in the conditions below. Staff has concluded the following conditions of approval:

1. Approval of this application is based on submitted application materials and public testimony. Approval is strictly limited to the submitted proposal and is not extended to any other development of the properties. Any modification of development plans not in conformance with the approval of application file #SUB 13-01, including all conditions of approval, shall first require an approved modification in conformance with the relevant sections of this *Canby Land Development and Planning Ordinance*. Approval of this application is based on the following:
 - a. Subdivision Land Use Application and narrative
 - b. Subdivision plan pages 1-8, titled "Northwoods Estates Phase II" and dated February 2010.
 - c. Park plans titled "Landscape Plan, North Elm Street Park" and "Irrigation Plan, North Elm Street Park", dated November 2013
 - d. "Northwoods Estates Conceptual Plat Phases I, II, III & IV", dated December 2005
 - e. "Northwoods Estates, Canby OR. Conceptual Development Plan", dated December 29, 2005
 - f. Findings, Conclusions & Final Order SUB 05-12, signed and approved March 27, 2006
 - g. Northwoods Estates Development Agreement, dated January 11, 2007
 - h. All other materials and public comments submitted in conjunction with the SUB 13-01 application

Public Improvement Conditions:

General Public Improvement Conditions:

2. Prior to the start of any public improvement work, the applicant must schedule a pre-construction conference with the city and obtain construction plan sign-off from:
 - a. City of Canby Planning: Reviews plans for depiction of the conditions of approval determined by the Planning Commission
 - b. City of Canby Engineer assigned to review this proposal
 - c. Canby Public Works
 - d. Canby Fire District
 - e. Canby Utility
 - f. Northwest Natural Gas
 - g. Canby Telcom
 - h. Wave Broadband

- i. Oregon Department of Environmental Quality (DEQ)
- 3. The applicant shall submit engineered plans of all public improvements for review at the pre-construction conference, including:
 - a. Curbing, sidewalk, and planter plans
 - b. Streets plans
 - c. Street lighting plans
 - d. Street signage plans
 - e. Street striping plans
 - f. Park improvement plans
 - g. Stormwater system plans, including pervious pavement plans
 - h. Sewer system plans
 - i. Electric plans
 - j. Water/fire hydrants plans
 - k. Cable/broadband plans
 - l. Underground telephone plans
 - m. CATV plans
 - n. Natural gas plans
- 4. The applicant shall address all comments made in the consulting engineer review of this proposal (Gordon Monroe) memorandum dated 2.6.14 prior to the construction of public improvements.
- 5. The development shall comply with all applicable City of Canby Public Works Design Standards.
- 6. "NW 11th Place", currently noted as "B Street", shall be named on the final plat and on all final construction plans.
- 7. The applicant shall submit grading and erosion control plans for approval by Canby Public Works prior to the construction of public improvements. Grading of all proposed roads shall follow the natural topography and shall preserve the natural features of the site as much as possible.
- 8. A 1200c erosion control permit shall be obtained by DEQ; if DEQ does not require a 1200c permit the applicant shall submit documentation from DEQ stating that a 1200c permit is not required.
- 9. The applicant shall grade all areas of the site, including the proposed lots, to a height within one foot of the planned house foundation ground elevation.
- 10. The applicant shall negotiate any possible Transportation SDC credit exchange and determination of its suitability for a voluntary offer for the installation of traffic calming measures on N Birch Street or W Territorial Road with the City Council.
- 11. The applicant must obtain a city Street Opening Permit if the applicant wishes to install curb cuts and driveways during the construction of public improvements so that the city may verify compliance with city access spacing standards.

Fees/Assurances:

- 12. All public improvements must be installed prior to the recordation of the final plat. If the applicant wishes to forgo construction of public improvements until after the recordation of the final plat, then the applicant shall pay a bond in accordance with 16.64.070(N-P) to the city as assurance for their later installation.
- 13. If the applicant chooses to pay a bond for some or all of the required public improvements, then the applicant shall obtain a certificate from the designated city

engineer for this proposal that states:

- a. The applicant has complied with the requirements for bonding or otherwise assured completion of required public improvements.
 - b. The total cost or estimate of the total cost for the development of the subdivision. This is to be accompanied by a final bid estimate of the subdivider's contractor, if there is a contractor engaged to perform the work, and the certificate of the total cost estimate must be first approved by the designated city engineer for this proposal.
14. The applicant must guarantee all public improvement work with a maintenance bond in accordance with 16.64.070(P).
 15. The applicant must pay the city Master Fee authorized engineering plan review fee equal to 0.4% of public improvement costs prior to the construction of public improvements.

Streets & Sidewalks:

16. A roadway striping plan shall be submitted by the applicant and shall be approved by the contract city engineer for this project and by the Public Works street department prior to the construction of public improvements.
17. Roadway striping plans shall be reviewed by the contract city engineer for this project for the one way portions of N. Elm to ensure that differentiation of one way travel is clear.
18. Roadway striping shall be in accordance with the MUTCD.
19. A roadway signage plan shall be submitted by the applicant and shall be approved by the contract city engineer for this project and by the Public Works street department prior to the construction of public improvements.
20. The applicant shall be responsible for installing all required street signage at the time of construction of public improvements.
21. Roadway signage shall be in accordance with the MUTCD.
22. Parking is prohibited along the one-way portions of Elm in the form of no parking signs and/or painted curbs. The applicant shall show no parking areas in the roadway striping and street signage plans.
23. The traffic control "triangles" at each end of the park strip shall be paved with stamped concrete and have mountable curbs.
24. The bulb-out areas at Elm and NW 10th Avenue and Douglas and NW 10th Avenue shall be paved with stamped concrete.
25. The final street plans shall show that the right-of-way lines at the SW corner of 11th at Elm have a minimum corner radius of 12 feet.
26. All landscaping shall follow the vision clearance standards of 16.16.030(G)(1).
27. Relevant *Condition #32* from SUB 05-12 Findings, Conclusions & Final Order: For NW 10th Avenue the curves on the bump-outs must be designed to facilitate street sweeping.
28. Relevant *Condition #10* from SUB 05-12 Findings, Conclusions & Final Order: The following design parameters shall be met:
 - c. The minimum curb radius for and cul-de-sacs except on W 11th Place shall be 48-feet to facilitate maintenance vehicles per IFC standards.
 - d. The "K" values for vertical curves shall meet AASHTO requirements.
29. Relevant *Condition #33* from SUB 05-12 Findings, Conclusions & Final Order: Per the Transportation System Plan shared bike lanes (not striped) are required on NW 10th

Avenue and NW Territorial Road.

Park Improvements:

30. The Canby Parks and Recreation Board and the Canby Parks Department shall approve all park improvement plans prior to the start of construction of park improvements.
31. The Canby City Council shall be required to formally accept the proposed park dedication prior to the start of the construction of park improvements. The applicant shall obtain approval of park improvement plans from the Canby Parks Department and the Canby Parks and Recreation Board prior to City Council acceptance of the proposed dedication.

Water:

32. Relevant *Condition #15* from SUB 05-12 Findings, Conclusions & Final Order: Private water lines (irrigation) will not be allowed to be constructed in the public right-of-way. Private water lines may cross streets if they are in casings.
33. The applicant shall address all water comments stated in Gordon Munro's memorandum dated 2.6.14

Sewer:

34. Sanitary sewer system plans shall be approved by DEQ prior to the construction of public improvements; the applicant shall provide the city with a letter from DEQ stating their approval of sanitary sewer system plans.
35. Relevant *Condition #18* from SUB 05-12 Findings, Conclusions & Final Order: The sanitary sewer shown in an easement crossing lot 67 on the site plan shall be located in the street or as required by the Public Works supervisor.
36. Relevant *Condition #19* from SUB 05-12 Findings, Conclusions & Final Order: The end of the sanitary sewer lines on NW 12th Avenue and N Douglas Street shall have manholes to facilitate maintenance of the system.
37. Relevant *Condition #22* from SUB 05-12 Findings, Conclusions & Final Order: The sanitary sewer shall be extended to the phase line and a temporary clean out installed. This shall be done for each phase in order to facilitate the subsequent phase of the development.
38. The applicant shall address all sanitary sewer comments stated in Gordon Munro's memorandum dated 2.6.14

Stormwater:

39. Stormwater systems shall be designed in compliance with the Canby Public Works Design Standards.
40. Storm drainage plans shall be approved by DEQ prior to the construction of public improvements; the applicant shall provide the city with a letter from DEQ stating their approval of stormwater system plans. (Revisions in the storm water management plan may increase flow to previously rule authorized UIC's).
41. The applicant shall submit revised storm plans and a revised storm report that includes any proposed stormwater design changes. These plans and reports shall be reviewed and approved by the consulting engineer assigned to this project and by DEQ.
42. The applicant shall submit plans detailing permeable pavement areas; these plans

- shall be inspected and approved by Canby Public Works and the consulting city engineer reviewing this project prior to the installation of public improvements.
43. The applicant shall address all stormwater comments stated in Gordon Munro's memorandum dated 2.6.14
 44. Relevant *Condition #20* from SUB 05-12 Findings, Conclusions & Final Order: Subsurface evaluations in the vicinity of the proposed drainage improvements shall be conducted by a licensed hydrologist, soil scientist, geologist, or engineer.

Final plat conditions:

General Final Plat Conditions:

45. The applicant shall apply for a final plat at the city and pay any applicable city fees to gain approval of the final subdivision plat. Prior to the recordation of the final plat at Clackamas County, it must be approved by the city and all other applicable agencies. The city will distribute the final plat to applicable agencies for comment prior to signing off on the final plat. Applicable agencies may include:
 - a. City of Canby Planning: Reviews plans for depiction of the conditions of approval determined by the Planning Commission
 - b. City of Canby Engineer assigned to review this proposal
 - c. Canby Public Works
 - d. Canby Fire District
 - e. Canby Utility
 - f. Northwest Natural Gas
 - g. Canby Telcom
 - h. Wave Broadband
 - i. Oregon Department of Environmental Quality (DEQ)
46. All public improvements or assurances shall be made prior to the approval of the final plat.
47. The final plat must contain the information required in 16.68.030, 16.68.040(B), and 16.68.050. The city engineer assigned to review this subdivision or county surveyor shall verify that these standards are met prior to the recordation of the subdivision plat.
48. "NW 11th Place", currently noted as "B Street", shall be named on the final plat and on all final construction plans.
49. All "as built" of public improvements, including: curbing and sidewalks; planter strips; streets; street lighting; street signage; street striping; park improvements; storm; sewer; electric; water/fire hydrants; cable; underground telephone lines; CATV lines; and natural gas lines, shall be filed at the Canby Public Works and the Canby Planning Department within sixty days of the completion of improvements and prior to the recordation of the final plat.
50. The applicant shall record the final plat at the county within 6 months after the final plat is approved by the city.
51. Clackamas County Surveying reviews pending subdivision plat documents for Oregon Statutes and county requirements. The subdivision plat must be recorded at Clackamas County within one year of approval of the tentative plat or the applicant must request that the Planning Director approve a six-month extension for recordation of the approved final plat.
52. The applicant or County if they agree shall provide the city with a copy of the final plat in a timely manner after is recorded at Clackamas County.

Infill Lots

53. Lots 42, 52, 54, 59, 60, and 74 shall be noted as "Infill lots subject to the infill lot standards of 16.21" on the final plat.

Easements

54. A 12 foot utility easement along all of the lot's street frontages shall be noted on the final plat. This easement may be combined with other easements and shall be measured from the property boundary.
55. The applicant shall note any additional water line easements as required by Canby Utility on the final plat.
56. The proposed sidewalks along Elm (not adjacent to the park) are partially on private property. These areas where sidewalks are partially located on private property shall be noted with a sidewalk easement on the final plat. This easement may be combined with other easements and shall be measured from the property boundary.

Street Trees

57. The final plat shall show a 12 foot tree easement along all street frontages of all proposed parcels. This easement may be combined with other utility and sidewalk easements and shall be measured from the property boundary.
58. The applicant shall pay the city fee for city establishment of street trees per the Tree Regulation standards in Chapter 12.32 of the Canby Municipal Code. This fee shall include trees to be planted along the planter strips along NW 10th Avenue. All street tree fees shall be paid prior to the recordation of the final plat.

Park Dedication

59. The final plat shall note that the park tract is conveyed to the City of Canby for public park use.
60. The applicant shall convey the proposed park dedication in a general warranty deed.

Monumentation/Survey Accuracy Conditions

61. Lot and perimeter monumentation shall be approved by the County Surveyor and/or the city engineer assigned to review this project.
62. The County Surveyor and/or the city engineer assigned to review this project shall verify that the standards of 16.64.070(M) are met prior to the recordation of the final plat.
63. Monuments shall be reestablished and protected in monument boxes at every street intersection and all points of curvature and points of tangency of street centerlines as required by Oregon Revised Statutes Chapter 92. The city engineer assigned to review this subdivision or county surveyor prior to the recordation of the subdivision plat.
64. Installation of the front lot monumentation (along and within street rights-of-way) shall be guaranteed. Any monuments destroyed during improvement installation shall be replaced at the developer's expense. The city engineer assigned to review this subdivision or county surveyor shall confirm required monuments prior to the recordation of the subdivision plat.

Residential Building Permits Conditions:

- 65.** Construction of all required public improvements and recordation of the final subdivision plat must be completed prior to the construction of any homes.
- 66.** The homebuilder shall apply for a City of Canby Site Plan Permit and County Building Permit for each home.
- 67.** The homebuilder shall apply for a City of Canby Erosion Control Permit.
- 68.** All residential construction shall be in accordance with applicable Public Works Design Standards.
- 69.** On-site stormwater management shall be designed in compliance with the Canby Public Works Design Standards.
- 70.** Prior to the issuance of a City Site Plan Review permit, final construction plans must be approved by the city. This includes, but is not limited to, approval by:
 - a.** City of Canby Planning: Reviews plans for depiction of the conditions of approval determined by the Planning Commission and for setback, height, etc. requirements
 - b.** City of Canby Engineer assigned to review this proposal
 - c.** Canby Public Works
- 71.** Clackamas County Building Codes Division will provide structural, electrical, plumbing, and mechanical plan review and inspection services for home construction. The applicable building permits are required prior to construction of each home.
- 72.** Per the Canby Public Works Design Standards, minimum residential driveway widths at the inside edge of the sidewalk shall be 12 feet and the maximum residential driveways widths shall be 24 feet with an allowed exception for 28 feet for a home with 3 or more garages.
- 73.** Lots 42, 52, 54, 59, 60, and 74 are subject to the infill standards of 16.21.050; building permit applications for these lots shall include the distances from lot lines to neighboring residences as well as existing heights and setbacks of the neighboring buildings.
- 74.** Lots 52, 53, and 54 shall have fire sprinklers installed per IFC and IBC standards.
- 75.** Relevant *Condition #13* from SUB 05-12 Findings, Conclusions & Final Order: The building plans for the following lots shall show front yard and dwelling orientation towards N Elm St: Lots 44, 45, 46, 47, 48, 49, 62, 63, 64, 65, 66, and 67.
- 76.** Relevant *Condition #14* from SUB 05-12 Findings, Conclusions & Final Order: The following access restrictions shall apply to certain lots: Lots 45, 47, 48 and 62 shall access 12th Avenue only. Lots 63 and 64 shall access 11th Avenue only. Lots 57 and 67 shall access 10th Avenue only. Lots 56 and 57 shall access the cul-de-sac labeled "B" street only.
- 77.** Relevant *Condition #29* from SUB 05-12 Findings, Conclusions & Final Order: Five (5) foot sidewalks inclusive of curb shall be constructed along all street frontages. Where mailboxes, fire hydrants or other obstructions must be located at the curb, sidewalks shall swing away from the curb such that the walkway remains unobstructed for a full five-foot width. Sidewalks shall as shown on the approved site plans.

VII. Decision

Based on the application submitted and the facts, findings, and conclusions of this report, Staff recommends that the Planning Commission **approve** Subdivision File #SUB 13-01 pursuant to the Conditions of Approval presented in this Staff Report in Section VI.

Sample motion: I move to approve Subdivision File #SUB 13-01 pursuant to the Conditions of Approval presented in this Staff Report in Section VI.

6 February 2014

Memorandum

To: Bryan Brown, City of Canby

From: Gordon Munro

Subject: Northwood Phase II
K/J 1191024*00

The preliminary plans and application have been reviewed for Northwood Estate phase II, and the following are my comments.

1. It should be noted that the design plans are much more advanced than is typical for a land use application. A detailed design review will still be required to take place after the planning process is complete, and there may be changes required to design details. The land use planning process should not be considered approval of the design.
2. A striping and street signage plan will be required for the final design for the entire subdivision. Of particular concern is striping at the entrance and exit to the one-way couplet on Elm Street, and "one way" and "no parking" signs on Elm Street.
3. A street lighting plan will be required.
4. The developer will be required to obtain an erosion control permit (1200c).
5. The storm drainage plans using UIC's and the sanitary plans will need to be reviewed and approved by the DEQ.
6. Due to the phasing boundaries there are no drainage facilities for N. Douglas St. The plans show that the run-off from the street will discharge to open field that would be phase III. Drainage facilities will be required as part of phase II.
7. At the pre-application meeting it was mentioned that the catch basins will need to have 24-inch sumps. This detail still shows only 18-inch sumps, so this will need to be modified.
8. The turning movements at both ends of the one-way couplet on Elm Street will need to be verified during final design using turning software such as auto-turn. The geometry should be sufficient for trucks such as garbage truck and moving vans to make the turns without mounting the curbs.
9. It is unclear what is intended for the bulb-outs on Elm Street and 10th Street. Will they be concrete, grass or other. Any plantings or furnishing would need to be kept low for

site distance and safety concerns. During final design this will need to be coordinated with City Staff.

10. Vegetation is shown on the two small islands at either end of the one-way couplet. During the pre-application meeting it was requested that this be stamped concrete, and mountable curbs.
11. The sanitary sewer on NW 12th Ave, east of Elm Street is shown to be over 300-feet long with a clean-out at the end of the line. The clean-out should be replaced with a manhole.
12. The sanitary sewer at the intersection of Elm Street and 10th Ave. appears to be in a PUE, which is acceptable as long as the PUE for that location is written to include sanitary sewers. However, the pipe is very close to the edge of the PUE and there is no way the City could repair the pipe and stay within the PUE. Therefore, additional easement width is required such that there is at least 7-feet of easement width from the centerline of the pipe to the west (into lot 67).
13. During the pre-application meeting the City staff requested that the clean-outs for the sanitary sewer services have a 6-inch riser with a one-way sweep, and that they be located in the sidewalk. The design detail needs to be adjusted to show this.
14. The plans do not show pervious pavement, however, the City has used pervious pavement in several locations in the parking area of the street to address storm drainage issues. During final design, the use of pervious pavement in specific locations should be reviewed and may be required.
15. The cul-de-sac on "B" street does not appear to meet requirements for a turn-around for emergency vehicles. The Fire Chief should review this and determine if it is acceptable.
16. With regard to the Park, I have received comments from city staff. Some of the comments include: a 5-foot sidewalk around the park, a driveway entrance and parking area for maintenance in the park, an electrical service, a water service stub, no concrete sidewalks across the park, no utility valves in the park, all irrigation valves in one location, no lights, one row of trees at 40-foot alternating between crimson king maple and autumn purple ash, a trash receptacle and pet waste dispenser.
17. There was discussion during the pre-application meeting of extending water and sanitary sewer service to the lots in phase IV that are the south side of Elm Street. This will avoid the need to cut the street for services later.

18. While the City does not review the water system, it should be noted that at the pre-application meeting Canby Utilities requested the water line on 11th Street be looped back to 10th Street. That would require an easement on lots 73 and 74, or 72 and 73 in phase II. It would also require the construction of the water line in that easement as part of phase II. The line and easements would be extended as part of phase III.
19. There should also be a requirement that Canby Utility review and approve the water system design during the final design of the project.

If you have questions concerning this information, please contact me.

cc: file

CITY OF CANBY –COMMENT FORM

If you are unable to attend the Public Hearing, you may submit written comments on this form or in a letter addressing the Planning Commission. Please send comments to the City of Canby Planning Department:

By mail: Planning Department, PO Box 930, Canby, OR 97013
In person: Planning Department at 111 NW Second Street
E-mail: lehnerta@ci.canby.or.us

Written comments to be included in the Planning Commission’s meeting packet are due on *Wednesday, February 12, 2014*. Written comments can also be submitted up to the time of the Public Hearing on *Monday, February 24, 2014* and may be delivered in person to the Planning Commission during the *Public Hearing at 7 pm* in the City Council Chambers, 155 NW 2nd Avenue.

Application: SUB 13-01 Northwoods Phase II

COMMENTS:

Due to smaller than minimum sized cul-de sac on B street. (2010 OFC appendix D)
Lots 52, 53 and 54 shall have fire sprinklers installed per IFC and IBC standards.

All access roads including one way need to have 20’ free and clear access
(2010 OFC chapter 5 section 503)

YOUR NAME: __Todd Gary_____

EMAIL: tgary@canbyfire.org_____

ORGANIZATION or BUSINESS (if any): Canby Fire_____

ADDRESS: 221 S Pine Canby OR 97013_____

PHONE # (optional): 503-266-5851_____

DATE: 2-6-2014_____

Thank you!

2014

CITY OF CANBY - COMMENT FORM

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Application: SUB 13-01 Northwoods Phase II

COMMENTS:

My wife and I are very supportive of this development and would like to see the approval move forward. It is good for the entire community and the city!

YOUR NAME: KEVIN GALVIN
EMAIL: kgalvin@canby.or.us
ORGANIZATION or BUSINESS (if any): _____
ADDRESS: 1294 N. Fir St. Canby, OR 97013
PHONE # (optional): _____
DATE: 2/7/14

Thank you!

CITY OF CANBY –COMMENT FORM

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Application: SUB 13-01 Northwoods Phase II

COMMENTS:

I'm concerned about increased traffic on Elm as a shortcut to + from Territorial and 7th. I'd like to see some sort of traffic speed reduction (speeding) put into place when the streets are put in. We already are a shortcut from 13th.

YOUR NAME: Joyce Skoren
EMAIL: gma.thorpe@gmail.com
ORGANIZATION or BUSINESS (if any): _____
ADDRESS: 1353 N. Elm
PHONE # (optional): _____
DATE: 2-11-2014

Thank you!

From: [B Karmel](#)
To: [Angeline Lehnert](#)
Subject: Comment: SUB 13-01 Northwoods Phase II
Date: Wednesday, February 12, 2014 4:37:22 PM

This comment is in lieu of using Comment Form for Application SUB 13-01 Northwoods Phase II.

Barbara M. Karmel
bkarmel@canby.com
219 NW Territorial

February 12, 2014 (deadline for written comments to be included in meeting packet)

Comment: I remain very worried about traffic impact from this subdivision for those headed to or from 99e or northwest Canby. I expressed this concern at a community meeting, but it was brushed aside as not a problem.

What do the developers and City plan to do to direct subdivision traffic (now and after future phases) to 10th street instead of heading north through the current residential area on Elm to the intersection with west Territorial.

Here's the problem: The path of least resistance from this development for those going or coming from 99e or northwest CanbyCountry Club/residential areas is the **ONE TURN route**: North on Elm, right on Territorial all the way to 99e with **ONE stop sign** on the way or the reverse.

The alternative route involving more resistance would be **2 turns and 2 or 3 stop signs** via 10th st. east to Holly or Ivy, to **east** Territorial. Wouldn't be "natural" for frequent drivers to use less this less convenient route.

The Elm-to Territorial route endangers driveways of existing residences and children in the small park . It involves fragile west Territorial rather than using 10th to Holly, a collector street. I am a resident on west Territorial, and we already have rampant violation of 25 MPH speed limit, occasional drag races at night and a dangerous situation for pedestrians, bikes and cars.

One possible solution: Make traffic on the small divided section of Elm move ONE-WAY counter-clockwise (as seen from the north.) In other words, make south on Elm the path of least resistance for the vast majority of new residents (on the west side of Elm) to head south to 10th.

Thank you for the opportunity to comment.

Barbara Karmel



City of Canby
 Planning Department
 111 NW 2nd Avenue
 PO Box 930
 Canby, OR 97013
 (503) 266-7001

LAND USE APPLICATION

SUBDIVISION

Process Type III

APPLICANT INFORMATION: (Check ONE box below for designated contact person regarding this application)

Applicant Name: NORTHWOOD INVESTMENTS Phone: —
 Address: 1127 NW 12th AVE Email: —
 City/State: CANBY, OR Zip: 97013

Representative Name: RON TATONE, PARTNER Phone: (503) 266-9542
 Address: 1127 NW 12th AVE Email: CANBYRGT@HOTMAIL.COM
 City/State: CANBY, OR Zip: 97013

Property Owner Name: NORTHWOOD INVESTMENTS Phone: —
 Signature: Ronald M. Satow Managing Partner
 Address: _____ Email: _____
 City/State: _____ Zip: _____

Property Owner Name: David Kadwell Phone: 503-304-5328
 Signature: [Signature]
 Address: 148 SW 6th Ave Email: dkkadwell@mac.com
 City/State: Canby Zip: 97013

NOTE: Property owners or contract purchasers are required to authorize the filing of this application and must sign above

- All property owners represent they have full legal capacity to and hereby do authorize the filing of this application and certify that the information and exhibits herewith submitted are true and correct.
- All property owners understand that they must meet all applicable Canby Municipal Code (CMC) regulations, including but not limited to CMC Chapter 16.49 Site and Design Review standards.
- All property owners hereby grant consent to the City of Canby and its officers, agents, employees, and/or independent contractors to enter the property identified herein to conduct any and all inspections that are considered appropriate by the City to process this application.

PROPERTY & PROJECT INFORMATION:

NW 10th AVE GRANT TO BIRCH; N. ELM 10th TO 13th 10.3 32AD 200,1700 32BB 501
 Street Address or Location of Subject Property Total Size of Assessor Tax Lot Numbers 33BC 6600
 Property

VACANT FARM LAND R1 LDR
 Existing Use, Structures, Other Improvements on Site Zoning Comp Plan Designation

33 LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION
 Describe the Proposed Development or Use of Subject Property

STAFF USE ONLY				
<u>503-266-7001</u>	<u>11/19/13</u>	<u>[Signature]</u>		
FILE #	DATE RECEIVED	RECEIVED BY	RECEIPT #	DATE APP COMPLETE

Property Owner Name: Rich Kadwell
 Signature: [Signature]
 Address: 1284 SW 13th Canby OR

sales contract at a time when it was legal to configure property lines by deed or contract, then those recorded deeds may be obtained from the Clackamas County Office of the Clerk, or a Title Company can also assist you in researching and obtaining deeds.

Applicant City
Check Check

- ~~NA~~ If the development is located in a Hazard ("H") Overlay Zone, submit one (1) copy of an affidavit signed by a licensed professional engineer that the proposed development will not result in significant impacts to fish, wildlife and open space resources of the community. If major site grading is proposed, or removal of any trees having trunks greater than six inches in diameter is proposed, then submit one (1) copy of a grading plan and/or tree-cutting plan.

SUBDIVISION APPLICATION – TYPE III

- Ten (10) paper copies of the proposed plans, printed to scale no smaller than 1"=50'. The plans shall include the following information:
- Vicinity Map. Vicinity map at a scale of 1"=400' showing the relationship of the project site to the existing street or road pattern.
 - Site Plan-the following general information shall be included on the site plan:
 - Date, north arrow, and scale of drawing;
 - Name and address of the developer, engineer, architect, or other individual(s) who prepared the site plan;
 - Property lines (legal lot of record boundaries);
 - Location, width, and names of all existing or planned streets, other public ways, and easements within or adjacent to the property, and other important features;
 - Location of all jurisdictional wetlands or watercourses on or abutting the property;
 - Finished grading contour lines of site and abutting public ways;
 - Location of all existing structures, and whether or not they are to be retained with the proposed development;
 - Layout of all proposed structures, such as buildings, fences, signs, solid waste collection containers, mailboxes, exterior storage areas, and exterior mechanical and utility equipment;
 - Location of all proposed hardscape, including driveways, parking lots, compact cars and handicapped spaces, loading areas, bicycle paths, bicycle parking, sidewalks, and pedestrian ways;
 - Callouts to identify dimensions and distances between structures and other significant features, including property lines, yards and setbacks, building area, building height, lot area, impervious surface area, lot densities and parking areas;
 - Location of vision clearance areas at all proposed driveways and streets.
 - Landscape Plan
The following general information shall be included on the landscape plan:
 - Layout and dimensions of all proposed areas of landscaping;
 - Proposed irrigation system;
 - Types, sizes, and location of all plants to be used in the landscaping (can be a "palette" of possible plants to be used in specific areas for landscaping);

- Identification of any non-vegetative ground cover proposed, and dimensions of non-vegetative landscaped areas;
- Location and description of all existing trees on-site, and identification of each tree proposed for preservation and each tree proposed for removal;
- Location and description of all existing street trees in the street right-of-way abutting the property, and identification of each street tree proposed for preservation and each tree proposed for removal.
- Elevations Plan
The following general information shall be included on the elevations plan:
 - Profile elevations of all buildings and other proposed structures;
 - Profile of proposed screening for garbage containers and exterior storage areas;
 - Profile of proposed fencing.
- Sign Plan.
 - Location and profile drawings of all proposed exterior signage.
- Color and Materials Plan.
 - Colors and materials proposed for all buildings and other significant structures.
- Name of Proposed Subdivision Plat (subject to review and approval by Clackamas County).
- Township, range, and section in which the property lies.
- Title Block Including:
 - Name & address of engineer or surveyor who prepared plans
 - Date that the plans were prepared
 - Scale of the drawings (standard engineer's scale)
- Subdivision boundary, lot lines, lot dimensions, gross area in square feet of each lot (excluding the square footage of accessways for flag lots), proposed public and private easements, and subdivision phase boundaries;
- If any undevelopable tract is proposed to be created, the dimensions, gross area, and purpose of the tract shall be included.
- If any oversized lots are proposed, which in the opinion of the Planning Director are likely to be further divided in the future, provide an illustration of how the lot could be further divided in conformance with all CMC standards in a manner which provides for continuation of streets and provides adequate building envelopes.
- Existing contour lines having the following minimum intervals:
 - One-foot contour intervals for ground slopes up to five percent;
 - Two-foot contour intervals for ground slopes between five and ten percent;
 - Five-foot contour intervals for ground slopes exceeding ten percent.
 - Include base flood elevation and delineation of any areas on the property subject to inundation in the event of a 100-year flood.
- Location and proposed disposition of all existing: driveways, wells, septic tanks, drain fields, easements, drainage ways, and jurisdictional watercourses or wetlands on or abutting the property. As a reminder, the property owner is responsible for meeting all state/federal wetland and waterway regulations.
- Location, names, right-of-way width, improvement dimensions, curve radius, and grades of all existing and proposed streets and public access ways within the proposed subdivision and abutting the subdivision.
- Identify the classification of all streets in accordance with the Canby Transportation System Plan. Show typical cross-sections of proposed street improvements, including identification of proposed street trees. Provide street center profiles showing the finished grade of all streets as approved by the City

Engineer, including extensions for a reasonable distance beyond the limits of the proposed subdivision.

- Location and type of existing and proposed transit facilities.
- Location of all proposed utilities, including sewer, water, storm water, electric, telephone, and natural gas; including utility sizes and grades.
- Indicate on the proposed plans how the proposed lots meet Canby's solar access standards (only applicable to lots created in an R-1, R-1.5, or R-2 zoning district).

SUBDIVISION – TYPE III: APPLICATION PROCESS

1. Prior to submitting an application, all applicants are encouraged to request a pre-application meeting with the City, or the City Planner may determine that a pre-application meeting is necessary after an application has been discussed or upon receipt of an application by the City. To schedule a pre-application meeting, an applicant must submit a completed pre-application form and set of preliminary plans to the City Planner, and after receiving the Planner's initials, must then make and take 16 copies of the pre-application materials to the Canby Public Works Department to schedule the pre-application meeting. The City does not charge a fee for a pre-application meeting.
2. Prior to submitting an application, all applicants must hold a neighborhood meeting with surrounding property owners and any recognized neighborhood association representative, pursuant to the procedures described in Canby Municipal Code Section 16.89.070. In certain situations, the Planning Director may waive the neighborhood meeting requirement.
3. At the time an application is submitted to the City, payment of all required application processing fees is required. An application will not be accepted without payment of fees. City Staff can provide you with information concerning application fees.
4. Staff will check the application, making sure that it is complete and all fees are paid. Copies of the application materials are routed to various City/State/County departments, as applicable, for their comments. Along with the comments received from others, the application is reviewed for completeness. The City Planner will accept or return the application with a written list of omissions within thirty (30) calendar days of the submittal.
5. Staff investigates the application, writes a staff report, issues public notice, notifies surrounding property owners, and makes all facts relating to the request available to the Planning Commission and all interested parties.
6. Prior to the public hearing, the City will prepare notice materials for posting on the subject property. This material must be posted **by the applicant** at least ten (10) days before the public hearing.
7. The staff report will be available to all interested parties seven (7) days prior to the hearing.
8. The Planning Commission holds a public hearing. The staff report is presented to the Commission. Testimony is presented by the applicant, proponents and opponents, followed by rebuttal from the applicant.
9. The Commission then issues findings of fact which support approval, modification, or denial of the application. A decision may be appealed to the City Council.
10. If an approval or a denial is appealed, City Council holds a public hearing. The staff report is presented and testimony taken, as at the original hearing(s). Unless the City Council decides to

hear the appeal de novo, only testimony regarding items already in the record is permitted, and no new information may be entered. In the case of an appeal, the Council may affirm, revise or reverse the action of the Planning Commission in all or in part. The Council may also remand the matter back to the hearing body for further consideration.

11. Prior to construction of any of the subdivision improvements required pursuant to CMC 16.64.070, a preconstruction meeting is held with the City and all applicable utility and service providers. If required, this meeting must be held before issuance of any permits.

SUBDIVISION – TYPE III: STANDARDS AND CRITERIA

Under Section 16.62.020 of the Canby Municipal Code, an application for tentative subdivision approval shall be evaluated based on the following standards and criteria:

- A. Conformance with the text and applicable maps of the Comprehensive Plan;
- B. Conformance with other applicable requirements of the Land Development and Planning Ordinance;
- C. The overall design and arrangement of lots shall be functional and shall adequately provide building sites, utility easements, and access facilities deemed necessary for the development of the subject property without unduly hindering the use or development of adjacent properties; and
- D. It must be demonstrated that all required public facilities and services are available, or will become available through the development, to adequately meet the needs of the proposed land division.

SUBDIVISION APPLICATION – TYPE III
Instructions to Applicants

All required application submittals detailed below must also be submitted in electronic format on a CD, flash drive or via email. Required application submittals include the following:

Applicant City
 Check Check

- One (1) copy of this application packet. The City may request further information at any time before deeming the application complete.
- Payment of appropriate fees – cash or check only. Refer to the city’s Master Fee Schedule for current fees. Checks should be made out to the *City of Canby*.

SUBDIVISION APPLICATION – TYPE III

Applicant City
 Check Check

- Mailing labels (1" x 2-5/8") for all property owners and all residents within 500 feet of the subject property. **If the address of a property owner is different from the address of a site, a label for each unit on the site must also be prepared and addressed to “occupant.”** A list of property owners may be obtained from a title insurance company or from the County Assessor.
- One (1) copy of a written, narrative statement describing the proposed development and detailing how it conforms with the Municipal Code and to the approval criteria, including the applicable Design Review Matrix, and availability and adequacy of public facilities and services. **Ask staff for applicable Municipal Code chapters and approval criteria.** Applicable Code Criteria for this application includes:

- Three (3) copies of a Traffic Impact Study (TIS), conducted or reviewed by a traffic engineer that is contracted by the City and paid for by the applicant (**payment must be received by the City before the traffic engineer will conduct or review a traffic impact study.** Ask staff to determine if a TIS is required.
- One (1) copy in written format of the minutes of the neighborhood meeting as required by Municipal Code 16.89.020 and 16.89.070. The minutes shall include the date of the meeting and a list of attendees.
- One (1) copy in written format of the minutes of the pre-application meeting
- One copy of either the recorded plat or the recorded deeds or land sales contracts that demonstrates how and when legal property lines were established and where the boundaries of the legal lot(s) of record are located. If the property is a lot or parcel created by plat, a copy of the recorded plat may be obtained from the Clackamas County Surveyor’s office. If the property is a legal lot of record created by recorded deed or land

Subdivision Application

City of Canby

NORTHWOOD ESTATES

PHASE II

Application for Subdivision Approval
NORTHWOOD ESTATES PHASE II
November 2013

Co-Applicants: Ron Tatone, Fred Kahut, Dr. Lynn Kadwell,
Lyle Read (as Bresco, Inc.), and Curt McLeod
c/o Ron Tatone, Managing Partner
1127 NW 12th Avenue
Canby, OR 97013

Engineer: Curran-McLeod, Inc.
Consulting Engineers
6655 SW Hampton, Suite 210
Portland, OR 97223

Site: Portions of Map 3S1E33BB501, 3S1E32AD100, 3S1E32AD200,
3S1E32AD1700 and the entire tax lot 3S1E33BC6600.

Comprehensive Plan Designation LRD Low Density Residential

Planning Zone R-1 Single Family Residential

Total Area 10.30 acres

The Northwood Estates subdivision was approved by the City of Canby under SUB 05-12 on March 29, 2006, and was constructed in 2007. As a component of the original subdivision application a Master Plan for the entire 31.57-acre, four-phase development was approved by the Planning Commission with conditions of approval documented in a Development Agreement executed on January 11th, 2007, and recorded under fee number 2007-007387 Clackamas County Deed Records. Modification 06-08, and Modification 07-02 secured approval of minor construction revisions to the conditions of approval.

At the January 24, 2011 planning Commission meeting, the Commission discussed and approved a three-year extension of the subdivision approval. The approval is valid until January 24, 2014. With this application, the property owners are requesting approval to construct Phase II and requesting the approval of the remaining phases be extended, in accordance with the development agreement.

The 10.30 acres, proposed 33 lots Northwood Estates Phase II encompass parts of tax lots 3S1E33BB501, 3S1E32AD100, 3S1E32AD200, 3S1E32AD1700 and the entire tax lot 3S1E33BC6600. These properties are owned by Northwood Investments, a partnership of local residents including Ron Tatone, Fred Kahut, Dr. Lynn Kadwell, Lyle Read and Curt McLeod.

These properties are all located within the City Limits and UGB. The site is zoned R-1 Single Family Residential as are adjacent properties to the east, west and south. Immediately to the north is phase I which was platted in 2007 and recorded in Plat Book 136 page 002 as subdivision number 4140. The remaining phases will be platted in a manner consistent with the original layout and development agreement.

The purpose of completing a subdivision application is to assure compliance with these approved planning documents. We have enclosed detailed preliminary plans which are in accordance with the prior approval documented in the Development Agreement as part of this application. General design comments include:

Sanitary Sewer: The plan extends the existing 8" mainline at the southern terminus of N. Elm Street to provide gravity service to this phase of the development. All pipelines will be 8" diameter.

Water System: All waterlines will be extended to complete looping on all abutting streets. Fire hydrants will be placed in accordance with direction from the Fire Department. All domestic waterlines will be a minimum of 8" diameter. The irrigation system to the park will be provided by a service line from the northern park area, which was extended during the first phase of construction. This system is piped separately from the domestic water system and controlled by the City Park's staff.

Street Network: The Master Plan is to extend N Elm Street to provide a primary north-south local street connection between NW 10th Avenue and Territorial Road, and to construct NW 10th Avenue to provide a continuous east west Neighborhood Route. NW 10th Avenue is classified as a Neighborhood Route in the TSP and is proposed to be 40-foot wide paved surface in an ultimate 60 foot right-of-way to match the existing improvements, as opposed to a 36' street as published in the TSP for a neighborhood route.

This project includes full width improvements on NW 10th Avenue, although, SDC credits will be requested for the oversizing beyond a 36'

street section, and for the half street improvements abutting the adjacent developed property of St. Patrick's Church.

The internal streets will vary from the 20-foot wide one-way travel lanes along the park on the N Elm Street Boulevard, to 28-foot local streets in a 40-foot right-of-way on NW 11th and NW 12th Avenues. No parking is proposed along the park frontage roads and all abutting residential properties will have garage access from the side streets, not from N Elm Street, eliminating driveways along the park frontage.

Storm Drainage: All storm water will be collected and disposed of on-site, incorporating best management practices, dry wells, and infiltration systems. All storm drainage systems have been approved as rule authorized by DEQ in a letter dated February 16, 2007, which was provided to the City to fulfill the master planning requirements of the initial phase of construction.

Parks & Recreation: The Master Plan for the four-phase development proposed approximately three acres to be set aside to provide park and open space. As part of the first phase of Northwood Estates, approximately two thirds of this area was dedicated to the City of Canby in 2007, extending from NW 14th Ave to the south end of the first phase of development. Phase II will dedicate the remaining area identified in the Master Plan for the park. The City has agreed, as documented in the Development Agreement, to provide a credit for the park land dedication and waive all Parks and Recreation SDC's for all phases of this development.

This current phase of the park consists of a narrow linear strip between the boulevard lanes of N Elm Street approximately 600 feet from the current terminus of Phase I, south to NW 10th Avenue. The boulevard park area will include curbs, sidewalks or walkways, grass surfacing, street trees, irrigation, and lighting, which will be detailed in a subsequent design document for the Parks Department review and approval.

**Electric, Gas
Cable, Phone** All utilities will be provided as required by the utility providers. The overhead electrical wire along NW 10th Street will remain overhead, but all other utilities will be relocated underground.

A pre-application conference with the City and utility providers was held on April 25, 2013. Minutes of that meeting are attached.

On October 29th, 2013, a neighborhood meeting was held to discuss the development with the neighborhood association and surrounding property owners. Minutes of the meeting are also attached.

APPLICABLE CRITERIA AND STANDARDS

The following sections provide a narrative to demonstrate compliance with the applicable sections of Title 16. Land Development and Planning Ordinance of the Canby Municipal Code.

Prior land use actions CPA 03-02 and ZC 03-02 on this property have confirmed compliance of this property with the requirements of the Comprehensive Plan criteria for urbanization, land use and housing elements, resulting in this property being included within the Canby Urban Growth Boundary and Zoned as R1 for single family Residences.

A preliminary list of applicable Canby Municipal Code requirements was provided by the City Planning Department, to include the following:

- 16.08 General Provisions
- 16.10.050 Parking Standards Designated (single-family dwelling)
- 16.10.070 Access (20' minimum access width)
- 16.16 R-1 Low Density Residential Zone
- 16.21 Residential Design Standards
- 16.42.025(C)(e) General Sign Standards
- 16.46 Access Limitations
- 16.56 Land Division Regulation
- 16.62 Subdivisions-Applications
- 16.64 Subdivision Design Standards
- 16.68 Subdivision Final Procedures and Recordation
- 16.86 Street Alignment Regulations
- 16.88 General Standards
- 16.89 Application and Review Procedures
- 16.120.020, 030 & 040 Parks, Open Space and Recreation Land-Minimum Standards, Dedication Procedures, Cash in lieu of Dedication of Land

CANBY MUNICIPAL CODE COMPLIANCE:

Chapter 16.08 General Provisions

Development of Northwood Estates Phase II will be in compliance with all provisions of this chapter.

The development of NW 10th Avenue as a Neighborhood Route is specifically identified in the current Transportation System Plan.

In March of 2007 and April of 2009, the City commissioned Lancaster Engineering to complete Traffic Impact Studies for this development. A more recent Traffic Assessment study was completed by DKS Engineering for impacts of phase II and III of this development. No concerns were identified for the on-site development.

The current Traffic Assessment Study recommended that traffic calming devices such as speed cushions or driver speed feedback signs be provided, although these were a result of a speed study on N Birch Street and not a result of the impacts generated by the proposed development. Speed control and preventing bypass trips via Birch Street and Territorial Road were identified as major concerns in the neighborhood meeting.

This development will work with the City to implement identified traffic calming devices. Depending upon the scope of the improvements selected by the City, the Developer may request assistance for any required off-site improvements through a credit against the Transportation SDCs.

Chapter 16.10.050 Parking Standards Designated (single-family dwelling)

As per Table 16.10.050, the parking requirement for a single family dwelling is two spaces per dwelling unit for new construction. This requirement will be satisfied when plans are submitted for building permits on each lot. CC&R requirements will require the provision of off-street parking spaces to match the number of garage stalls provided, with a minimum of two spaces.

Chapter 16.10.070 Access

The development complies with all requirements of this chapter. This application proposes five locations where a joint driveway access will be required by the CC&Rs. This is intended to compliment the linear park development and minimize traffic conflicts on the one-way street sections. The proposed minimum number of access points and the minimum access width requirements for 1-2 dwelling units comply with the access requirements as published in Table 16.10.050(B)(8).

Chapter 16.16 R-1 Low Density Residential Zone

This project will be designed to comply with the conditions of the Canby Municipal Code Chapter 16.16 R-1 Low Density Residential development without exception.

Phase II of this development proposal is for 33 single family detached housing units as is permitted outright per 16.16.010A. New lots in the R-1 Zone are required to meet the development standards specified in Section 16.16.30. Development standards for on-site structures can be verified when plans for building permits are submitted by individual lot owners. All lots are greater than 7,000 square feet and less than 10,000 square feet.

Chapter 16.21 Residential Design Standards

This development will comply with all provision of this chapter.

In accordance with the Development Agreement with the City of Canby, lots number 42, 59, 60 and 74 will be required by the CC&Rs to satisfy the requirements of an infill home in accordance with 16.21.050. Additionally, the CC&Rs will require all properties abutting N Elm Street to have a

front door and porch facing Elm Street, with garage access from the side or rear of the structure.

Chapter 16.42.025 (C)(e) General Sign Standards

The applicant does not intend or propose to display any permanent signs as part of this development. Any temporary signs used for real estate sales will be in accordance with all requirements of this chapter and be placed by permit as required.

Chapter 16.46 Access Limitations on Project Density

This project will be designed to comply with all conditions of the Canby Municipal Code Chapter 16.46 Access Limitations on Project Density. The development has five access points, four of which are continuations of existing streets and one access was established with Phase I. The street dimensions will be sufficient to satisfy the requirements in Section 16.46.010.A for roadway and pavement width, number of access points and number of dwelling units.

Chapter 16.56 Land Division Regulations

This application complies with all the code requirements in this chapter without exception.

Chapter 16.62 Subdivisions- Applications

The application procedures defined in this chapter will be followed without exception.

All public utilities are available at the boundary of this phase of development and will be extended to the edge of the development for future phases as appropriate. The design of the development is an efficient use of the land and existing access points, and will provide good pedestrian access throughout.

Chapter 16.64 Subdivision Design Standards

This project is designed to comply with the conditions of the Canby Municipal Code Chapter 16.64 Subdivision Design Standards with the following clarifications:

16.64.010 H. Cul-De-Sacs - The length of the cul-de-sac temporarily noted as "B" Street on the plan is intended to be exempt from the need for a fire department turn-around, pending approval of the Fire Marshal and if required, the installation of residential fire sprinkler systems on required properties. No pedestrian route is proposed from the cul-de-sac to the adjoining right-of-way.

Chapter 16.68 Subdivision Final Procedures and Recordation

The applicant will comply with all the stated requirements as part of plat submittal, information needed and Planning Commission conditions.

Chapter 16.86 Street Alignment Regulations

This chapter is intended for new streets which are arterials, collectors and neighborhood connectors. Streets within this development and are classified as local residential streets except for NW 10th Avenue which is classified as Neighborhood Route per the TSP. The alignment for 10th Ave is already well established by the two existing segments to the east and west and is specifically identified in the TSP. The alignment of all local streets is dictated by the required connections to the existing streets abutting the property.

Chapter 16.88 General Standards and Procedures

The applicant will comply with all of the requirements stated in this chapter without exceptions.

Chapter 16.89 Application and Review Procedures

The applicant will comply with the Type III Application Procedure and the Planning Commission as outlined in Section 16.89.050.

Chapter 16.120 General Provisions, Section 16.120.020, 030 and 040 Minimum Standards for Park, Open Space and Recreational Land, Dedication Procedures and Cash in Lieu of dedication of Land

The Master Plan for the four-phase development proposed approximately three acres to be set aside to provide park and open space. As part of Northwood Estates, two thirds of this area was dedicated to the City of Canby in 2007, extending from NW 14th Ave to the south end of the first phase of development. Phase II will donate the remaining area identified in the Master Plan and Development Agreement for the park.

This current phase of the park consists of a narrow linear strip between the boulevard lanes approximately 600 feet from the current terminus of Phase I, to NW 10th Avenue. The boulevard park area will include curbs, sidewalks or maintenance strips, grass surfacing, street trees, irrigation, and lighting, which will be detailed in a subsequent design document for the Parks Department review and approval.

The applicant will complete the parkland dedication as part of recording the plat.

SUMMARY AND CONCLUSIONS

The information submitted with this application and accompanying plans and documents together demonstrate that the subdivision is in compliance with the standards and criteria listed in the Canby Municipal Code, including:

- A. Conformance with the executed Development Agreement for the project.
- B. Conformance with applicable requirements of the Land Development and Planning Ordinance.

C. The overall design and arrangement of lots is functional and adequately provides building sites, utility easements, and access facilities deemed necessary for the development of the subject property without unduly hindering the use or development of adjacent properties.

D. A demonstration that all required public facilities and services are available, or will become available through the development to adequately meet the needs of the proposed land division.

Therefore, the applicant requests that the Planning Commission approve this proposal.

Northwood Estates

January 2, 2014

Ms. Angie Lehnert, Associate Planner
Canby Planning Department
111 NW 2nd Avenue
Canby, OR 97013

**RE: NORTHWOOD ESTATES PHASE II APPLICATION
SUPPLEMENTAL INFORMATION**

Dear Angie:

This letter is in response to your request for additional information for the Northwood Estates Phase II subdivision application. Corresponding to your list, I have requested our engineer and partner to provide the following for your consideration:

1. The Stormwater Drainage Report was prepared in 2006 as a component of the Phase I application, and was approved by DEQ as Rule Authorized. Enclosed is a copy of the drainage Report dated October 2006.
2. We have enclosed a letter from Barbara Priest at DEQ, dated February 16, 2007, to Mr. Kevin Cook at the City of Canby that approved the Drainage Plan and confirmed the improvements for all phases are Rule Authorized. On this Phase II we have modified the stormwater disposal system from that earlier plan by using pervious paving in the parking strips on NW 10th Avenue as opposed to drainage swales identified in the report. Since submission of the Drainage Report in 2006, the City of Canby has promoted the use of pervious pavement as a better management practice than a swale.
3. We have been coordinating with Jeff Snyder to prepare a conceptual Park Development Plan and have enclosed a preliminary plan for review. Jeff has not had the opportunity to review this so this is entirely conceptual at this point and will be modified as he directs. We have designed an irrigation system using Rainbird 6504 heads as well as smaller head for the restricted areas at the ends of the park. The irrigation system has three zones and can utilize the controller installed as part of phase I, which has four wires that were extended to serve this new area of the park.

In accordance with the Development Agreement, the park improvements will include street improvements, curbs, sidewalks or walkways, grass surfacing, street trees, irrigation system and lighting. Similar to Phase I the lighting will be located on the residential side of the streets abutting the park land, as is shown under item 4 below, plus one light is proposed at each end of the linear park.

ZKRMT, Inc. • 1127 NW 12th Avenue • Canby, Oregon 97013 • (503) 266-9542

Lyle Read, President • Ronald G. Tatone • Dr. Lynn Kadwell • Fred Kahut • Curt McLeod

Ms. Angie Lehnert

January 2, 2014

Page 2

Some parking, either on the street or on the park frontage similar to Phase I will be important both for the park and the neighborhood. We will be working with Canby Fire Department to assure street parking is acceptable as our first option to provide for the park and neighborhood.

The concept plan shows a full width sidewalk on the perimeter of the park, however, we feel there will be too much hardscape if we place five-foot sidewalks on both sides of the 20 foot roadways abutting the park strip. The massive amounts of hardscape will diminish the green emphasis of the park and front lawns and we would ask to reduce that to a 24" strip just to assist with maintenance.

We will work with Jeff to finalize the design of all of the components of the park.

4. We have coordinated with Canby Utility and have enclosed a preliminary Street Lighting Plan for Phase II. This was intended to be shown on sheet 2.2 of the plans submitted to the City, however, that CAD layer was turned off. We have reprinted that sheet and enclosed it for your review.

On all local streets we are proposing to use an aluminum pole with roadway arm similar to that used in Phase I, but with a Canby Utility new standard LED cobra head fixture. The CU standard pole is 20 feet tall with 4 feet of bury, and an additional 2' rise in the road arm so the fixture is set at 18 feet. The fixture will be approximately 70 watt and the poles will be set at approximately every other lot line, on one side of the roadway. One additional light is proposed at each end of the linear park.

NW 10th Avenue is a neighborhood connector and warrants a different lighting design. To be consistent with the lights along the entire reach of NW and NE 10th Avenue, we are proposing to utilize a larger LED cobra on each of the existing wood poles. The new lights will look identical to the existing lights on North 10 Avenue but will have a better light distribution pattern being an LED. Power supplies to these lights will be from the underground power distribution system.

5. Regarding SDC credits for development of NW 10th Street, this subject was presented on page 10 of the December 30, 2005 original application for approval of the Master Plan for all phases of construction. That application stated that:

"SDC credits should be available for the additional right-of-way and street development beyond the requirements for a local street. The SDC credits should cover the additional right-of-way and street costs for the neighborhood collector streets (Northwest Territorial Road and Northwest 10th Avenue) and the right-of-way and half street improvements on Northwest 10th Avenue abutting the Catholic Church."

Ms. Angie Lehnert

January 2, 2014

Page 3

In accordance with that provision, transportation SDC credits were provided for the improvements on Territorial Road as part of Phase I. You noted that the Development agreement did not define an SDC credit for NW 10th Avenue; however, you should note the Development Agreement is silent on ALL SDC credits except for development of the park.

State statutes in 223.204 address providing an SDC credit for eligible development that is greater than the local government's minimum standard facility size, which for street improvements has been determined to be a 36' street with development on both sides. In accordance with the application submitted in 2005 and again for Phase II, we would ask for an SDC credit for the additional right-of-way and street costs for the neighborhood collector streets (Northwest 10th Avenue) and the right-of-way and half street improvements on Northwest 10th Avenue abutting the Catholic Church.

To be equitable, the development cost of any required street improvement that is larger than the minimal development standard, such as NW 10th Avenue, should be funded with revenues from all developers as opposed to from one developer. The SDC is the mechanism that collects revenues from all developers to pay for the cost of these types of larger, regionally significant improvements. The SDC provides an equitable funding source to allow the City to dictate the alignment of all substantial infrastructure improvements without creating a financial hardship on any one development.

6. We are not aware of the history as to why our conceptual plan in 2005 shows planter strips on NW 10th, NW 12th, 13th and a short reach of NW 14th. A revised Conceptual Plan in our file dated 2006 does not show planter strips on NW 12th, 13th or 14th. Phase I did not include planter strips on NW 13th or 14th Avenues. We anticipate constructing planter strips on NW 10th Avenue, but would ask for approval of curb tight sidewalks on NW 12th Avenue.

7. We are proposing to use the name "NW 11th Place" where the preliminary plans now show "B" Street. This name will be added when we prepare the final construction plans.

8. As submitted and approved in the Master Plan for the development, the 11th Place cul-de-sac design is 35 foot radius to the property line. The curb would be offset by 6 feet, to have a 29 foot radius to the face of curb. This specific reduced design radius was proposed with the Master Plan for all four phases for the shorter cul-de-sac improvements and complies with the Fire Department's requirements. These smaller diameter cul-de-sacs are not required to function as a turn-around for fire equipment.

Ms. Angie Lehnert
January 2, 2014
Page 4

The structural section of 11th Place cul-de-sac will be the same as all streets, with 4" of AC over 12" of crushed rock to comply with the current Public Works Design Standards. The standards were modified after these plans were prepared. The preliminary plans submitted with the application show 3 1/2" over 10 but will be modified to be 4" over 12". We have not submitted a section for this as requested, and assume the information can be derived from the sections shown. We anticipate the real question is in the curb and property line radius.

9. We have been working with Canby Utility for several years on the design of this property and how to incorporate the existing overhead power lines. All new power distribution systems will be underground but the existing overhead lines that follow NW 10th Avenue are primary feeders to the Canby Substation and it is not Canby Utility's practice to underground any primary feeders. The cost to underground these primary feeders exceeds the total cost of development for this entire phase of improvements. We are proposing to maintain the overhead feeder lines along NW 10th Avenue and construct all other new power distribution systems underground.

If you have questions, need electronic copies, or anything additional please let me know and we will provide that.

Very truly yours,

NORTHWOOD INVESTMENTS

Ronald G. Tatone,
Applicant Partner

Enclosures: Stormwater / Drainage Plan
DEQ UIC Rule Authorization
Preliminary Park Development Plans (2 shts)
Street Lighting Plan

January 17, 2014

CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 S.W. HAMPTON STREET, SUITE 210
PORTLAND, OREGON 97223

Ms. Angie Lehnert, Associate Planner
Canby Planning Department
111 NW 2nd Avenue
Canby, OR 97013

**RE: NORTHWOOD ESTATES PHASE II APPLICATION
REQUESTED SUPPLEMENTAL INFORMATION**

Dear Angie:

This letter is in response to the request directed to our office on January 15th for additional information for the Northwood Estates Phase II subdivision application.

Drainage issues:

- In a narrative, we anticipate completing all of the drainage improvements as stated in the earlier drainage report as submitted, with the exception of the infiltration ditches on NW 10th Avenue. When we complete the final design we would propose to recalculate the required area for pervious pavement and not construct the bio swales and infiltration trenches as are currently shown on the preliminary plans. The design will follow the requirements Public Works Design Manual and we will submit an amended drainage report with the plans as required.
- We are proposing the use of pervious paving in place of the bio swales on 10th Avenue. The bumpouts would not be changed and were not intended to be used for stormwater disposal. The bumpouts are not impacted by the LID drainage revision. The percolation rates defined by earlier geotechnical testing shows there is sufficient capacity for stormwater disposal in the pervious pavement without using the bumpouts as additional disposal area. This will be defined in the final design and the amended drainage report.
- The request to use curb-tight sidewalks on NW 11th and 12th Avenue is not in lieu of swales. Stormwater disposal is proposed through the use of drywells that were defined in the original drainage report and approved as rule authorized by DEQ. We were not proposing the use of swales as the BMP prior to the drywell. The curbtight sidewalks will be consistent with Phase 1.
- The triangles at each end of the park are a requirement from the traffic study completed by the City so we are not proposing to eliminate them. We expect they will be concrete unless the Parks department would like them to be planters. Either way these triangles do not impact the drainage system.

Street Lighting: We have been working with Canby Utility for several weeks on the street lighting system. We will be using GE Evolve cobra head lights to match those used by CU and to

Ms. Angie Lehnert
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match Phase I of Northwood Estates, although the new lights will all be LED. The lighting on 10th Avenue will be 30 foot high cobra fixtures to match the existing 10th Avenue lighting from Grant to Pine Streets, and mounted on the existing wood poles. The lighting on the local streets will be smaller scale, 18 - 20 foot high cobra style on aluminum poles.

All of the LED lights by nature are fully shielded. We are, however, having trouble meeting the limits for the lumen levels for a street light application conclude CMC 16.43 was written for private lighting and not street lighting. Even the smallest option for the GE Evolve street lighting product line is over 3,000 lumens, which exceeds the maximum residential lighting limits in the code.

The fixtures we will be proposing to use when we submit plans will be for NW 10th Avenue are GE ERS1-0-CXCX-5-40-5-Gray which is 5200 lumens. The local street will be the same fixture but with the 3200 lumen output. We will continue to work on this and will provide the photometric analysis and details with the final design plans, with the goal being a similar looking pole and fixture and lumen levels to meet the code requirements if possible.

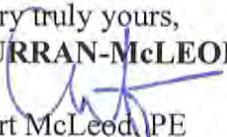
Property Ownership: All of the property is owned by Northwood Investments, which is a partnership with multiple owners. In 2002 Richard and David Kadwell were gifted a minor portion of the Northwood Investments ownership from their parents, but do not have any direct ownership of the real property outside of their Northwood Investments partnership ownership. Northwood Investments is the only legal entity on the deed and Ron Tatone is the manager for this project.

In the interests of avoiding delays, if you feel we need Richard and David's signature, we can provide that.

Lot 44 Frontage: Lot 44 has frontage of approximately 80 feet of frontage as shown on the preliminary plat provided with the application.

Let me know if you need additional information prior to scheduling the hearing and we will provide that as quickly as possible. We submitted the application in November and are concerned the delays in this application process will impact our ability to begin construction early in the construction season.

Very truly yours,
CURRAN-McLEOD, INC.


Curt McLeod, PE

Enclosures: GE Lighting Brochure

MEMORANDUM



EXPIRES: 12/31/13



720 SW Washington St.,
Suite 500
Portland, OR 97205
503.243.3500
www.dksassociates.com

DATE: September 6, 2013
TO: Bryan Brown, City of Canby

FROM: Chris Maciejewski, PE, PTOE
Steve Boice, PE
Joshua Swake, EI

SUBJECT: Canby Northwoods Subdivision Phase 2&3 Traffic Assessment

P#11010-024

This memorandum summarizes the review of proposed transportation elements and intersection safety associated with the proposed second and third phases of the Northwoods Subdivision in Canby, Oregon. Safety evaluation at intersections surrounding the project site and the need for a pedestrian crossing at the intersection of N Birch Street and NW 10th Avenue is discussed.

The subdivision is bounded by NW Territorial Road to the north, N Grant Street to the east, S Knights Bridge Road to the south, and N Birch Street to the west. The overall subdivision development consists of four separate phases totaling 110 residential lots over eight tax lots totaling 30 acres. The second and third phases feature 10.3 acres and 5.04 acres respectively zoned R1 (Low Density Residential), which is consistent with the proposed single family residential use.

The project site is categorized as an area of special concern in the City's Comprehensive Plan. This requires that a master plan be developed for the area because it is surrounded by existing neighborhoods which could be impacted as part of development. The master plan for the project site was prepared as part of the first phase and was approved by the City Planning Commission in March 2006. Since the master plan encompasses the entire 30 acre site as a whole, no additional traffic analysis is required to determine the transportation impacts to the surrounding roadway network for each phase. The master plan does however require that a transportation study be conducted for each phase to evaluate the design of the proposed roadway facilities, site circulation, and intersection safety.

Intersection Safety

Intersection safety (including sight distance and geometrics) was reviewed at existing intersections where project site traffic would access surrounding arterial and collector roadways. NW Territorial Road, N Birch Street and NW 10th Avenue (including proposed extension) are classified as neighborhood routes and N Knights Bridge Road is classified as an arterial roadway¹. Therefore; safety was reviewed at the following intersections:

¹ City of Canby Transportation Plan, Figure 3-6, DKS Associates, December 2010.



- N Birch Street/N Knights Bridge Road
- N Grant Street/N Knights Bridge Road
- N Birch Street/NW Territorial Road
- N Elm Street/NW Territorial Road
- N Birch Street/NW 10th Avenue
- N Grant Street/NW 10th Avenue

A field visit was conducted by DKS Associates on July 5, 2013 to assess the intersection characteristics which are summarized in Table 1.

Table 1: Intersection Sight Distance and Geometrics

Intersection	Posted Speed	Intersection Geometry	Traffic Control	Turning Movement	Sight Distance Required ²	Sight Distance Adequate?
N Birch St/ N Knights Bridge Rd	25 mph	3-way	Stop control N Birch St	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes
N Grant Street/ N Knights Bridge Rd	25 mph	4-way	Stop control all ways	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes
N Birch St/ NW Territorial Rd	25 mph	3-way	Stop control N Birch St	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes
N Elm St/ NW Territorial Rd	25 mph	3-way	Stop control N Elm St	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes
N Birch St/ NW 10 th Ave	25 mph	4-way	Stop control NW 10 th Ave	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes
N Grant St/ NW 10 th Ave	25 mph	4-way	Stop control NW 10 th Ave	Left	280 ft	Yes
	25 mph			Right	240 ft	Yes

Traffic control at these intersections consists of stop controlled along the minor street and uncontrolled along the major street with the exception of N Grant Street/N Knights Bridge Road which is an all way stop. All roadways have a posted speed of 25 miles-per-hour (mph) which was used to determine intersection sight distance requirements for the stopped approach for both left and right turning movements. As listed, adequate intersection sight distance is currently provided at all study intersections.

Crash records for the previous five years were used to determine the safety history at existing intersections to determine if there are any safety related concerns with anticipated traffic growth at these locations³. A summary of all the crashes during this time is given below in Table 2. A total of three crashes were recorded, two at the intersection of N Birch Street/N Knights Bridge Road and one at the intersection of N

² A Policy on Geometric Design of Highways and Streets, AASHTO, 2011, Intersection Sight Distance, based on posted speed of 25 mph.

³ Oregon Department of Transportation Crash Data System, <https://zigzag.odot.state.or.us>



Birch Street/NW Territorial Road. No crash trends were found at any of the study intersections; therefore the anticipated increase in traffic is not expected to influence safety at any of these intersections.

Table 2: ODOT Crash Data from 01/01/2008 to 12/31/2012

Intersection	Crash Type	Injury	Movement	From/To
N Birch St/ N Knights Bridge Rd	Angle	PDO	Right Turn	N/NW
			Straight	NW/SE
N Birch St/ N Knights Bridge Rd	Rear-end	INJ C	Straight	NW/SE
			Stop	NW/SE
N Birch St/ NW Territorial Rd	Fixed Object	INJ B	Straight	S/N

Site Circulation Review

With the project, NW 10th Street would be extended between N Birch Street and N Grant Street. This segment of N Elm Street would be a divided facility with a park in the center median. Additionally, N Elm Street would be extended from NW 13th Street to the proposed NW 10th Avenue extension.

The design plans for the proposed roadways (provided by the applicant) were reviewed in terms of roadway width, sidewalk width and location, and intersections with adjacent streets. Bicycle, pedestrian, and motor vehicle circulation were also reviewed to ensure there is adequate accessibility throughout the subdivision. Design plans were also reviewed to ensure that adequate sight distance could be provided at new intersections, such as N Elm Street and NW 10th Avenue and that all vision triangles could be clear from any obstructions.

After review of the preliminary plan sheets provided by the applicant, it appears that adequate sight distance could be provided at new intersections and the overall design (roadway width, sidewalk width and location, and intersections with adjacent streets) is in compliance with the City of Canby's Transportation System Plan and the Findings, Conclusions, and Final Order (Sub 05-12) issued by the Planning Commission of the City of Canby for Phase 1. Review of roadway signing and striping should be conducted to ensure current national standards are met as outlined in the Manual on Uniform Traffic Control Devices (MUTCD)⁴.

Street lighting is proposed along N Elm Street and N 10th Street. Lighting should be designed to City standards and minimum illuminance levels along the roadway and intersections should meet national recommended standards based on facility type and pedestrian activity⁵.

⁴ Manual on Uniform Traffic Control Devices, Federal Highway Administration, 2009

⁵ IESNA (Illuminating Engineering Society of North America) light level values are based on the American National Standard Practice for Roadway Lighting (RP-8-00), ANSI Approval Date 6/27/2000



Pedestrian Crossing Evaluation

The City has heard concerns regarding the need for a marked and signed crosswalk across N Birch Street at N 10 Street. N Birch Street is classified as a neighborhood route and has been noted to be used as a cut-through route between N Knights Bridge Road and NW Territorial Road (instead of N Holly Street). It is anticipated that with the development of 110 residential units within the 30 acre Northwoods Subdivision site, both the number of vehicles and pedestrians at this location would increase. The following discussion summarizes the evaluation of crosswalk needs at this location in addition to other enhanced pedestrian crossing treatments such as a center median island, curb extensions, or rectangular rapid flashing beacons.

N Birch Street consists of two travel lanes and has parking and sidewalks on both sides. It has a posted speed of 25 miles per hour and a paved width of 40 feet. N 10th Street is also classified as a neighborhood route and the proposed project would complete the east-west connection between N Birch Street and N Grant Street.

To assist with the assessment of appropriate pedestrian crossing treatments, a 24-hour traffic count and speed study was conducted along N Birch Street between NW 10th Avenue and NW 12th Avenue. As shown in Figure 1, a total of 3,265 daily vehicles were recorded (1,674 northbound, 1,591 southbound) along the roadway. The morning peak hour occurred between the hours of 7:00-8:00 a.m. while the evening peak hour occurred between 5:00-6:00 p.m. The figure shows the general trend of commuting traffic with volumes in the morning higher in the southbound direction towards the City and higher volumes in the northbound direction away from the City during the evening.

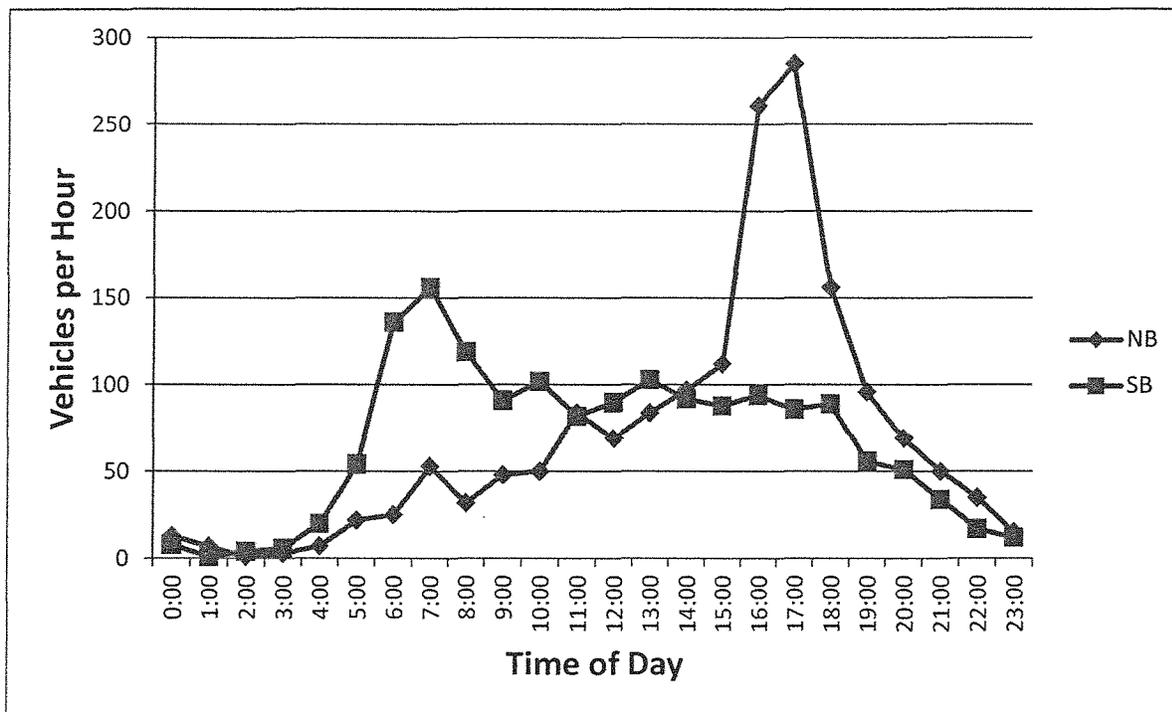


Figure 1: 24-Hour Volume Profile of Traffic on N Birch St.



Figure 2 illustrates the results of the speed survey. The measured 85th percentile speeds were 33 mph in the northbound direction and 32 mph in the southbound direction. Generally, vehicle speeds are 7-8 mph above the posted speed limit and 85 percent of vehicles travel greater than the posted speed along this roadway segment (34% of vehicles are traveling greater than 5 mph above the posted speed limit; 4% are traveling greater than 10 mph above the posted speed limit).

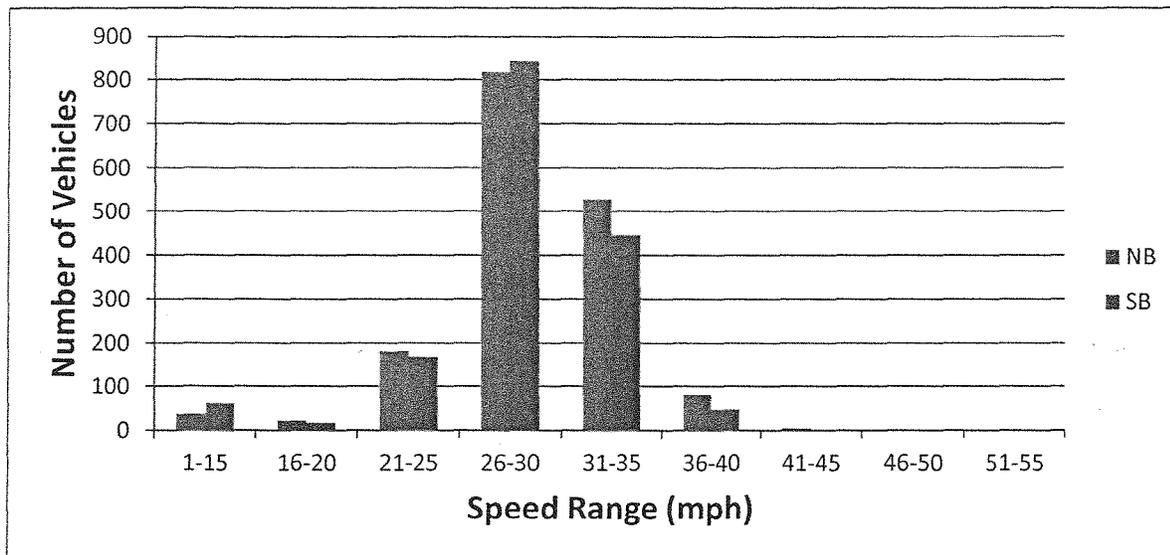


Figure 2: 24-Hour Speed Profile of Traffic on N Birch St.

Typically marked crosswalks are installed where there are 20 or more pedestrian crossings during the peak hour, multiple travel lanes, and high vehicle speeds⁶. Although measured speeds along N Birch Street are greater than the posted speed, neither the volume of vehicles or pedestrians warrant a marked and signed crosswalk at this time. With low pedestrian and traffic volumes even with full development of the Northwood's subdivision site, installing a marked crosswalk would not be warranted. Instead, it is recommended that traffic calming devices such as speed cushions or driver speed feedback signs be provided in an effort to reduce vehicle speeds along this roadway segment. Generally, speed cushions should be placed no greater than 500 feet apart which would result in approximately four along this roadway segment:

- Between NW Territorial Road and NW 13th Ave
- Between NW 12th Ave and NW 10th Ave
- Between NW 10th Ave and NW 9th Ave
- Between NW 9th Ave and N Knights Bridge Road

⁶ Traffic Control Devices Handbook 2nd Edition, ITE, 2013



Both reduced travel speeds in addition to reduced traffic volumes have been measured as the result of the installation of speed cushions along residential streets. Additionally, driver speed feedback signs have had positive results in slowing driver speeds. These devices could be implemented as a permanent installation or for a temporary time period as part of a City wide campaign which alters the location throughout the year.

If future traffic volumes and speeds, or pedestrian counts rise, a reevaluation of crosswalk needs should be conducted.

Findings

- Adequate sight distance is provided at all existing study intersections and could be provided at new intersections
- There were no crash trends found at any of the study intersections
- The overall design is in compliance with the City of Canby's Transportation System Plan
- Review of roadway signing and striping should be conducted
- Street lighting should be designed to City standards
- Installation of a marked crosswalk would not be warranted; however it is recommended that traffic calming devices such as speed cushions or driver speed feedback signs be provided along N Birch Street in an effort to reduce vehicle speeds. These recommendations are based on the findings from the speed survey and are not the result of impacts generated by the proposed development.

If you have any questions, please feel free to call or email.

**All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740**

Site Code: 1
N Birch St N-O NW 10th Ave

NB	Start Time	15	16	20	21	25	26	30	31-	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	999	Total	Pace Speed	Number in Pace
	07/23/13	0	0	0	1	2	9	5	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	24-33	11
	01:00	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	23-32	6	
	02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	19-28	1	
	03:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	24-33	3	
	04:00	0	0	0	0	0	5	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	24-33	6	
	05:00	0	0	0	4	9	16	2	8	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	25-34	16	
	06:00	2	0	3	12	26	26	6	9	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	24-33	17	
	07:00	0	0	0	4	19	16	3	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	23-32	36	
	08:00	0	0	0	8	20	16	13	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	24-33	24	
	09:00	2	1	3	28	38	28	19	13	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	25-34	32	
	10:00	1	1	2	14	26	27	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	25-34	37	
	11:00	7	2	7	28	44	38	28	28	8	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	24-33	51	
	12 PM	0	1	1	7	14	10	7	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	26-35	48	
	13:00	3	1	1	6	34	27	36	27	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	26-35	61	
	14:00	4	1	1	7	43	39	39	39	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	26-35	71	
	15:00	0	0	0	8	43	50	11	50	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112	26-35	84	
	16:00	7	4	4	28	128	82	12	82	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	261	25-34	187	
	17:00	7	3	3	28	144	89	13	89	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	285	25-34	208	
	18:00	5	1	1	10	83	53	4	53	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	25-34	119	
	19:00	0	2	2	8	45	35	4	35	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96	26-35	71	
	20:00	0	1	1	8	39	19	2	19	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	25-34	53	
	21:00	0	2	2	8	28	11	1	11	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	24-33	37	
	22:00	0	0	0	11	17	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	23-32	26	
	23:00	0	1	1	1	10	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	25-34	11	
	Total	38	22	22	181	818	527	81	527	81	5	5	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1674			
	Percent	2.3%	1.3%	1.3%	10.8%	48.9%	31.5%	4.8%	31.5%	4.8%	0.3%	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
	AM Peak	11:00	11:00	11:00	11:00	11:00	11:00	07:00	11:00	07:00	07:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
	Vol.	7	2	2	14	38	19	4	19	4	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	84			
	PM Peak	16:00	16:00	16:00	16:00	17:00	17:00	17:00	17:00	17:00	19:00	19:00	19:00	19:00	19:00	19:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00
	Vol.	7	4	4	28	144	89	13	89	13	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	285			
	Total	38	22	22	181	818	527	81	527	81	5	5	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1674			
	Percent	2.3%	1.3%	1.3%	10.8%	48.9%	31.5%	4.8%	31.5%	4.8%	0.3%	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

Stats

10 MPH Pace Speed : 25-34 MPH
 Number in Pace : 1203
 Percent in Pace : 71.9%
 Number of Vehicles > 25 MPH : 1433
 Percent of Vehicles > 25 MPH : 85.6%
 Mean Speed(Average) : 29 MPH

15th Percentile : 23 MPH
 50th Percentile : 28 MPH
 85th Percentile : 33 MPH
 95th Percentile : 36 MPH

**All Traffic Data
15105 SE 17th St.
Vancouver, WA. 98683
503-833-2740**

Site Code: 1
N Birch St N-O NW 10th Ave

SB	Start Time	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	999	Total	Pace Speed	Number in Pace	
	07:23/13	0	0	0	2	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	24-33	6	
	01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	19-28	1	4	
	02:00	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	21-30	4	6	
	03:00	0	0	0	2	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	21-30	5	20	
	04:00	2	0	0	2	0	10	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	25-34	14	54	
	05:00	1	0	0	6	0	36	9	9	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	136	24-33	43	104	
	06:00	5	1	0	15	0	82	33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	24-33	122	88	
	07:00	4	0	0	23	0	99	27	27	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	23-32	88	64	
	08:00	3	3	0	21	0	71	19	19	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	25-34	77	91	
	09:00	4	0	0	2	0	44	30	30	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	25-34	53	90	
	10:00	2	0	0	11	0	50	36	36	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	25-34	60	103	
	11:00	7	1	0	9	0	33	30	30	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	26-35	60	88	
	12 PM	8	0	0	9	0	43	27	27	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	25-34	60	91	
	13:00	2	1	0	4	0	56	37	37	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	26-35	81	92	
	14:00	7	0	0	9	0	36	35	35	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	26-35	60	88	
	15:00	3	0	0	8	0	43	26	26	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	25-34	53	94	
	16:00	3	2	0	5	0	49	32	32	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	25-34	70	86	
	17:00	4	2	0	5	0	34	40	40	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	26-35	63	89	
	18:00	1	3	0	9	0	43	30	30	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89	25-34	65	56	
	19:00	1	3	0	5	0	28	17	17	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	25-34	39	51	
	20:00	5	1	0	9	0	30	5	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	23-32	34	34	
	21:00	0	0	0	7	0	25	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	22-31	30	17	
	22:00	0	0	0	6	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	22-31	15	12	
	23:00	0	0	0	1	0	9	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	24-33	11	1591	
	Total	62	17	17	170	170	843	447	447	48	48	3	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1591		0	
	Percent	3.9%	1.1%	1.1%	10.7%	10.7%	53.0%	28.1%	28.1%	3.0%	3.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	AM Peak	11:00	08:00	07:00	07:00	07:00	07:00	10:00	10:00	09:00	09:00	10:00	10:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00	07:00				
	Vol.	7	3	3	23	23	99	36	36	11	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	156				
	PM Peak	12:00	18:00	13:00	12:00	12:00	13:00	17:00	17:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	13:00				
	Vol.	8	3	3	9	9	56	40	40	7	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	103				
	Total	62	17	17	170	170	843	447	447	48	48	3	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1591			
	Percent	3.9%	1.1%	1.1%	10.7%	10.7%	53.0%	28.1%	28.1%	3.0%	3.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Stats
 10 MPH Pace Speed : 25-34 MPH
 Number in Pace : 1150
 Percent in Pace : 72.3%
 Number of Vehicles > 25 MPH : 1342
 Percent of Vehicles > 25 MPH : 84.3%
 Mean Speed(Average) : 28 MPH

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING
 BIRCH ST at TERRITORIAL RD, City of Camby, Clackamas County, 01/01/2008 to 11/30/2012
 Total crash records: 1

CD 80
 07/17/2013
 CITY OF CAMBY, CLACKAMAS COUNTY

SPRSW	EAUCODATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	INT-REL	OFFRD	WTHR	CRASH	SFCL USE	TRLR QTY	MOVE	PH TYPE	INJ	AG E LICNS	LOC	ACT EVENT	CAUSE				
SE	ELGRDAY	DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDRT	SURF	COLL	OWNER	FROM	TO	SVTY	SVTY	RES	LOC	ACT	EVENT	CAUSE			
INVT	D.C.S.L.K.TIME	FROM	SECOND STREET	LOCTN	(HEAVES)	COMPL	DRVY	LIGHT	SVTY	VE TYPE	01	NONE	0	STRGHT	01	DRVR	INJUB	78	M	OR-Y	OR-25	
04008	NNNN	17	NW BIRCH ST	INTER	3-LEG	N	Y	RAIN	FIX	OBJ	0	STRGHT	0	STRGHT	01	DRVR	INJUB	78	M	OR-Y	OR-25	
COU	NNNN	0	NE TERRITORIAL RD	N	STOP	SIGN	N	WET	FIX	PRVTS	S-N	S-N	000	057,079	000	057,079	00	000	057,079	00	000	057,079
	SA			N			N	DAY	INJ	PSNCR	CAR											
	3P			05	0																	

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON... DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBN NON-SYSTEM CRASH LISTING
BIRCH ST at KNIGHTS BRIDGE RD, City of Camby, Clackamas County, 01/01/2008 to 11/30/2012
Total crash records: 2

CITY OF CAMBY, CLACKAMAS COUNTY

SPR	CLASS	CITY STREET	RD CHAR	INT-TYPE (MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	SPEC USE	TRLR QTY	MOVIE	PH TYPE	INJ	LOC	EDROR	ACT	EVENT	CAUSE	
NO	DIST	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	TO	SURTY	E	X	BSS	LOC			
MO	FROM	SECOND STREET	LOCCTN	(BLANES)	COMPL	DRVAVY	LIGHT	SVRTY	VH TYPE	01 NONE	TURN-R	01 DRVR	NONR	00 F	UNK				
9A	16	NW BIRCH ST	INTER	3-LEG	N	N	CLR	ANGL-OTH	01 NONE	N -NW	01 DRVR	NONR	00 F	UNK					
0398	0	NW KNIGHTS BRIDGE RD	NW 06	0	UNKNOWN	N	DAY	DDO	PSNGR CAR	02 NONE	STRGHT	01 DRVR	NONE	44 F	OR-Y	000	000	00	00
0355	16	NW BIRCH ST	INTER	3-LEG	N	N	CID	S-1STOP	01 NONE	STRGHT	01 DRVR	NONE	27 M	OR-Y	016,043,026	000	000	00	27,07
2P	0	NW KNIGHTS BRIDGE RD	CN 03	0	NONE	N	DAY	INJ	PSNGR CAR	01 NONE	STRGHT	01 DRVR	NONE	27 M	OR-Y	016,043,026	000	000	00
										01 NONE	STRGHT	02 PSNG	NO<5	01 M	OR-25	000	000	00	00
										02 NONE	STOP	01 DRVR	INJC	37 F	OR-Y	000	012	000	00
										02 NONE	STOP	02 PSNG	INJC	12 F	OR-25	000	012	000	00
										02 NONE	STOP	03 PSNG	INJC	08 F	OR-25	000	012	000	00
										02 NONE	STOP	04 PSNG	INJC	03 M	OR-25	000	012	000	00

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submission of crash report forms is the responsibility of the individual driver and reporting unit, the City of Camby and Oregon DOT can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer properly damaged only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON - DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING
BIRCH ST at NW 10TH AVE, City of Camby, Clackamas County, 01/01/2008 to 11/30/2012

CITY OF CAMBY, CLACKAMAS COUNTY

No Rows to Display

SECT	INT	RD	CITY	CLASS	INT-TYPE	OFFRD	CRASH	SECL USE	PH	ACT	CAUSE
DIST	REL	CHAR	STREET	DATE	(MEDIAN)	WTHR	TYPE	TRLR	TYPE	EVENT	
FROM	CONT	DIRECT	FIRST	TIME	LEGS	DRWY	COLL	OWNER	SVR		
TO	CONT	LOCN	STREET	TIME	(LANES)	LIGHT	TYPE	TYPE	TYPE		

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

KNIGHTS BRIDGES RD at GRANT ST, City of Canby, Clackamas County, 01/01/2008 to 11/30/2012

No Rows to Display

CITY OF CANBY, CLACKAMAS COUNTY

SECTION	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYPE	INT-REL	OFFERD	WTHR	CRASH	SECL USE	MOVE	FROM	TO	PH TYPE	SVTY	E	X	RES	LOC	ERRR	ACT	EVENT	CAUSE	
SECT	DATE	TIME	CLASS	CITY STREET	DIRECT	(MEDIAN)	LEGS	TRAF-	DRWY	LIGHT	COLL	SECL USE	MOVE	FROM	TO	PH TYPE	SVTY	E	X	RES	LOC	ERRR	ACT	EVENT	CAUSE

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Northwood Estates

Northwood Estates Neighborhood Meeting
Canby Methodist Church, 7:00 PM October 29, 2013



Attendance Rooster is attached.

On October 15th a notice of a neighborhood meeting was mailed to 283 properties lying within 500 feet of the Northwood property. A notice was also published in the Canby Herald multiple times prior to the meeting inviting anyone interested in the development of Phase II of Northwood Estates to a meeting on October 29th. Bob Backstrom also forwarded information to other members of the Riverside Neighborhood Association of the meeting. Mayor Hodson, and Council Members Traci Hensley and Clint Coleman, as well as ex-councilman Walt Daniels, were in attendance.

Ron Tatone, Lynn Kadwell and Curt McLeod meet with approximately 40 to 50 guests in the Fellowship Hall of the Canby Methodist Church at 7:00 on October 29th. The meeting was informal with a short presentation and question and answer period. Multiple copies of graphics were prepared including the phase II development, Phases 1 through 4 preliminary plat, an aerial photo of N Canby, and preliminary plans and specifications for Phase II construction, and were placed on the tables set up for guests.

Curt introduced the Northwood partners and presented the history of the development. Curt's personal relationship with the City and with Curran-McLeod, Inc was discussed. Contrary to the notice in the paper, the neighborhood meeting was hosted by Northwood Investments as opposed to Curran-McLeod, as was published. We discussed the relationship of the Northwood Investments partnership and the corporation of 2KRMT, Inc. who actually owned and developed Phase I and would be developing Phase II.

We presented an overview of the 33-lot Phase II scope of improvements as well as a brief discussion of the remaining Phases 3 and 4.

The general overview of the project is that we are working under a Development Agreement executed between Northwood and the City of Canby that included approval of all four phases of the project. Each phase is required to submit an application and follow all of the requirements for an application, including holding this neighborhood meeting to solicit any concerns. Our schedule anticipates submitting an application to the City in mid November, anticipating approvals can be secured by January or February 2014, with construction beginning in the spring and being complete by June or July 2014.

There was very little discussion on the Phase II improvements. Most of the concerns were related to Phase I or the overall four-phased development:

INFILL DEVELOPMENT:

The concerns raised by the neighbors were that the infill homes were not following the approval requirement. They interpreted the requirement to only allow a single story homes, whereas the CMC has several provisions that allow a two story homes to be placed on an infill lot. The Subdivision Approval SUB 05-12 and Development Agreement quantified which lots were to comply with the infill

requirements of the Canby Municipal Code. They general discussing concluded that the neighbors would like a limitation to a single story home on the lots designated as infill.

TRAFFIC CONCERNS:

No concerns were raised about the traffic patterns within the development; however, concerns were voiced about speed on Birch and Territorial Roads and the volume of cars on the adjoining streets.

We discussed the process of addressing traffic concerns on the surrounding streets, the need for a speed study and implementing calming improvements. All of this work is outside of the scope of our development, although we will likely complete the improvements noted for Birch Street at NW 10th Ave. All traffic studies are completed under the direction of the City but paid by the developer. Northwood has no involvement in the scope of the study or the improvements selected to be implemented. Neighbors should contact the City planning department to discuss specific concerns and improvements.

Speed was a major concern. Cars travel too fast on both Territorial Road and Birch Street. The neighbors felt some type of traffic calming improvements were needed on each street. Traffic volumes were anticipated to increase due to the development, however, there was mixed conclusions as to whether completion of 10th Avenue would reduce traffic on Territorial Road.

The traffic analysis completed by DKS included only Birch Street, not Territorial Road. The study conclusions were that there were no issues with the development but there were concerns about speed on Birch Street, unrelated to the development. The study indicated speed signs or speed cushions should be installed. The neighbors indicated signs would likely not be adequate. They indicated they would like photo tickets to be issued to speeders.

There was a concern raised about the volume of traffic that use Territorial Road as a bypass to the City of Canby. The desire was to divert traffic downtown to support business by making the Territorial route more difficult, with more stop signs, traffic calming or mean of slowing traffic to where Territorial was not an efficient route to skirt through the City.

COMPLIANCE WITH THE CC&Rs:

Several people were concerned Northwood partners were not enforcing the CC&Rs and we discussed the responsibility for enforcement. The responsibility to comply with the CC&Rs falls on the home owner, not the developer. Anyone has the right to enforce the CC&Rs and can recover all legal expenses incurred.

To our knowledge, no one has violated the CC&Rs, however, we committed to sending a note to all residents to make them aware of the requirements in the CC&Rs. Building plans are reviewed by the developer to assure compliance with our CC&Rs for size, stone work, roof breaks and general design features, but after that, all building plans are reviewed by the Building Department for code compliance. Street trees in particular are a code requirement and reiterated in the CC&Rs that residents must comply with the City's street tree code.

Meeting was over by approximately 8:30.

NORTHWOOD ESTATES NEIGHBORHOOD
MEETING 10/29/13 7:00 CMCHURCH

	Bob Packstrom	bback@canby.com
	Bill Kinman	No email
	Brandy Andrews	No email
	GENE & CAMY FORSYTHE	ELFORSYTHE@CANBY.COM
	Ralph Netter	
	BOB ZIMMER	panhd bobz@MSN.com
	Barbara Rodgers	rodgersbb3@yahoo.com
	Traci Hensley	hensleyt@ci.canby.or.us
	Chuck Hammack	CWHZ1@CANBY.COM
	Andy Conklin	conklin_andy@hotmail.com
LARRY-	Debbie Jackson	Jacksoda11@yahoo.com
	Debbie Jewell	dijewella@canby.com
	Clint Coleman	tandc@wbcable.net
	Barbara Karmel	bkarmel@canby.com
	Brian Hodson	hodsonb@canby.ci.or.us
	ELEANOR BELIEU	1381 N HAZELHUT CT
	Wes Belieu	" " " "
	BRIAN LISAC	1355 N Fir Street
	Colin Maulding	Colin Maulding Eavrosolutions Co.
	JEFF SPRINGER	Jeffnoregon@gmail.com
	GILBERT STENGER	GILBANE@WEB-STER.COM
	Ileana Stenger	
	Dan Rom	danrompc@yahoo.com
	JOCK PENNIXTER	jackp1@canby.com
	Susan Sessions	orjellybellylady@gmail.com
	REX SEBASTIAN	dakotakioblo@yahoo.com
	Robert Loach	P.O. Box 990 no computer

Northwood Estates

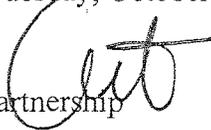
MEMORANDUM

TO: NW Canby Residents

RE: NORTHWOOD ESTATES PHASE II DEVELOPMENT
NEIGHBORHOOD MEETING

DATE: 7:00 PM on Tuesday, October 29, 2013

FROM: Curt McLeod
Northwood Partnership



Northwood Investments partnership anticipates submitting an application to the City of Canby for approval to construct Phase II of the Northwood Estates subdivision. This phase of development will include 33 additional lots and complete construction of NW 10th Avenue from Grant Street to Birch Street, and North Elm Street from the south end of the Phase I development to NW 10th Avenue. This Phase will also complete the connection of NW 12th Avenue to North Elm Street. We have enclosed an overview of the master plan for the entire property for your information.

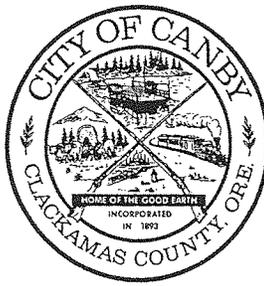
Over the past two decades our group has had numerous neighborhood meetings to explore plans and identify interests of the neighborhood. As a result, in 2006 our master development plans incorporated many of those ideas in our four phases of development, including a reduced number of lots, larger lot sizes, designating many lots as an 'Infill Lot' to be compatible with neighbor homes, and we have included a neighborhood park.

The Master Plan for Northwood Estates was submitted and approved in 2006, including all four phases of the development. In 2007, the City of Canby executed a development agreement that requires development to follow the approved Master Plan, which prevents making any substantive changes to the design. Additionally, the City recently completed a traffic impact study for the proposed development and identified calming improvements on N Birch Street. We understand this is an important issue with the neighborhood and anticipate traffic calming improvements will be completed with our master plan development.

We would like to invite you to a neighborhood meeting to discuss the project at 7:00 PM on Tuesday, October 29th at the Canby Methodist Church, at the corner of Holly Street and Territorial Road. If you are unable to attend but have questions, we encourage you to contact us directly. Curt McLeod can be reached at (503) 475-0431, or by email at CJM@Curran-McLeod.com.

ZKRMT, Inc. • 1127 NW 12th Avenue • Canby, Oregon 97013 • (503) 266-9542

Lyle Read, President • Ronald G. Tatone • Dr. Lynn Kadwell • Fred Kahut • Curt McLeod



Pre-Application Meeting

Northwoods Subdivision Phase II

April 25, 2013

10:30 am

Attended by:

Ron Tatone, Northwoods Investments, 503-266-9542
Gordon Munro, City Engineer, 503-295-4911
Gary Stockwell, CU Electric, 503-263-4307
Solomon Jacobsen, Canby Public Works, 503-849-2064
Bryan Brown, Planning Department, 503-266-0702
Curt McLeod, Northwoods Investments, 503-684-3478

Dave Michaud, Wave Broadband, 971-338-3270
Jeff Snyder, Parks Department, 503-266-0732
Jerry Nelzen, Canby Public Works, 503-266-0759
Dan Mickelsen, Erosion Control, 503-266-0698
Angie Lehnert, Planning Department, 503-266-0686
Doug Quan, CU Water, 971-563-6314

This document is for preliminary use only and is not a contractual document.

NORTHWOODS INVESTMENTS, Curt McLeod

- I am the City's Engineer and I am separating myself and I would like everyone to be aware of it. In the late 1980's we purchased this property and developed a master plan for the 30 acres and have been working on this project for 24 years. We developed phase I in 2006-07 and we are bringing in phase II of a four phase project. This phase will complete 10th Avenue and have a continuous route from N Birch to N Pine Streets and a connection from NW Territorial Road to NW 10th Avenue. There will be 33 lots in this phase and includes all the development aspects of the plans we have prepared for this meeting. In 2007, we had to submit all four phases to the Planning Commission and they reviewed all phases, made comments and modifications and adopted it in a development agreement.
- I have a question on the cul-de-sac bulbs around town like Erica Acres or Heritage Park, some of them are massive and if we put in a 30 foot island we would still have a 40 foot roadway because they are 96 feet curb to curb. Gordon stated the Fire Department wants a 48 foot radius. Curt said it would be nice to do something with it. Bryan said if you did something like an island it would be a maintenance problem, especially if you want landscaping. How would you take care of it since it is in the middle of the street? It would be a maintenance nightmare with no homeowner's association.

CITY OF CANBY, CONTRACT ENGINEER, Gordon Munro

- I have looked through the plans and they are well developed. I am assuming the Conditions of Approval for phase I are still valid and we are still moving forward. Bryan said there are some which are applicable.
- We may need to look at some stripping issues for N Elm Streets to differentiate which way to go on the one ways.
- We will need to do a percolation test and the UIC's need to be registered. Curt brought the Rule Authorized DEQ letter for the UIC Registration for the entire subdivision. Curt said

when we did this in 2005 or so, Barbara Priest required the whole developed at the time for the master plan.

- Are you going to get a 1200c permit? Curt said no because it does not drain to a surface water body. Gordon said for Erosion Control? Curt said we will get the Erosion Control through the City, but I do not think it will require DEQ 1200c. Gordon stated we will work through that during this process. I think it is large enough it may require it.
- It would be helpful where you have the extensions or where we are connecting to existing roadways to show them on these plans.
- We may want to consider on N Elm Street since these streets are 20 feet wide and I am assuming there is no parking allowed. Curt said he thought the Fire Department requires a 20 foot clearance and there probably is no parking along N Elm Street and Bryan added there is no parking along the one-way sections of N Elm Street. We may want to place some pervious pavement along this area of N Elm Street because some of the UIC's are having problems with capacity and the fix has been putting in pervious pavement.
- I noticed on 10th Avenue it is all pervious in the parking strips and we do not have any wells and Curt said we have approval for bio-swales on 10th Avenue, but since the City has changed their designs in the last few years, we are proposing to use percolation infiltration. Gordon said we may need to have a UIC for an over flow in case the pervious pavement gets packed and Curt said it was designed for pervious pavement with curb cuts and allow the excess water to go into the ditch area, if indeed the road does fail. Gordon asked for a modified storm report for this section of phase II. Bryan said he noticed there was a requirement for one (storm report) and he did not know where the Planning Department's copy is and Curt said we have a copy and we submitted it at the time of the Planning review. Gordon stated we need an addendum to address the changes.
- The services on N Elm Street for phase IV are you planning on putting them in now or do street cuts later. Curt said he would not expect to do street cuts, although I have thought about it and it is an issue we need to look at and Gordon concurred.
- What are you planning to do with the little islands? Curt said they were added after the traffic study was completed and required at the development stage of the master plan. Bryan asked are you talking about the small islands at each end of N Elm Street and the answer was yes. Gordon wanted more information so we can see the grade and how close we are getting to the property lines.

CITY OF CANBY, EROSION CONTROL, Dan Mickelsen

- You are planning your Erosion plan construction entrances on NW 10th Avenue and no trucks will be allowed on N Birch Street. We would like to see the trucks go down N Holly Street to NW Territorial Road. Curt said you would like us to drive through phase I? Dan stated yes. Curt said if they come in on N Holly, why not have them use NW 10th Avenue and it would be a two block shot instead of going all the way to Territorial. Dan said we would have to have an agreement in place for you to resurface that section of 10th Avenue, I guess that would be Jerry's call not mine.
- We will need to have a traffic plan in place.

- I put in my notes for a 1200c and I agree with you, you are not discharging into a water source, but you are disrupting more ground. You will be getting the 1200c, not us, I just wanted to you know it.
- I would really like to see 60 to 65% moisture for the area to keep the dust down.
- Page 2. The sanitary line which is cutting through this easement area, the Public Works Department has some concerns because it is in this choked down area and would have to block the street to clean the sewers. If the line can be moved over here in the intersection they would not have to close the entire roadway.
- The scale is different and Curt said it is a half scale, when you read 20 it is actually 40.
- Dan wanted a confirmation there will not be any on-street parking on N Elm Street around the Tract B section. Curt said I know the Fire Department requires a 20 foot clear roadway, it will probably be no parking, I will have to verify with Canby Fire.
- Dan wanted to know if it was proper to have two one-way streets named the same. Sol stated it is proper and in other jurisdictions it works without any confusion. Curt said it can be called a boulevard also.
- Page 3.4. The cul-de-sac named NW B Street, I would like you to re-check the grade because there are no catch basins. If you build it up 6 to 8 inch and run it towards N Elm Street it would alleviate any standing water problems.
- I made a notation on the plans where this phase ends at N Douglas Street and will continue on in phase IV. By the way it is drawn you will need to add another dry well because you have your two catch basins going to a drywell and you do not have your sedimentation manhole. Every place else you have a sedimentation manhole and you have it omitted here. Curt said they would put it in the plans for phase IV. It is a nice 3 to 4 acre parcel to do something different with than the single family residences. Gordon said this is phase III not phase IV. Curt said the section you are talking about Dan, flows into 10th Avenue.
- Page 3.5. Dan said why pervious asphalt on 10th Avenue. Curt said there will be a small ditch and the difference is I did not want to do the large swales with a 12 inch drop coming off the curbs. We wanted to do pervious paving and then a gentle swale, if we do clog the pervious paving it can over flow into a swale with Canby's good sandy soil. Dan asked if there was going to be curb tight sidewalks. Discussion ensued. It was concluded to be a planter strip. Dan wanted to make sure the swale was not too deep so people do not fall into a one-foot ditch.
- Page 4.1. I do not see where you have any sanitary service to lot 49 and I do not know how they are going to get it there. Curt said it is coming off the easement from NW 12th Avenue and there are several lots that are isolated and their driveways will have to come off side streets and have access only through an easement on the adjoining properties. We did not allow any driveways off of N Elm Street. Dan saw the easement line where Curt explained.
- The 4 inches of asphalt you are doing is 2-1/2 inches now and 1-1/2 inches later. Curt said we let the first base go for a year, because if we needed to open the roadway for some unforeseen reason we will not undermine the street.
- Dan discussed being the first person to see these contractor due to Erosion Control Applications and would like to see the 6 inch clean out pipe stubbed up 2 to 3 feet in the sidewalk area and tie in the 4 inch past the utility easement and then you are done. Jerry said

we have some issues with sewer laterals at your subdivision, a contractor went past the power and up against the house having to do all sorts of connections instead of a straight shot. Our clean out is in someone else's yard or clear up in the driveway past the utilities. Curt did not understand why the contractor did the sewer lateral that way and he would make sure they put the clean outs at the property line and both Dan and Jerry said in the sidewalk. This way we would know if it has been air tested and in a Brooks boxes. Jerry said use glue for the caps for air testing and after the test cut them off and put the screw cap on.

- Page 6. The catch basin shall be 24 inches deep and your detail shows 18 inches, you will need to change it to 24 inches.
- The typical sanitary service detail will need to be changed showing a 6 inch stand pipe to a 4 inch pipe with a one-way sweep not a two-sweep. Jerry said one-way sweep going towards the main.
- In the park strip "Tract B" put in one sanitary service, just put in a length of pipe. I am thinking of the future in case you want to build something. I did not get a chance to run this by Jeff, but it is one fitting and a scrap of pipe. We can mark it on the map and then it is there. Curt said there is a service to the park to the north and I do not think you would want one at this property.

CITY OF CANBY, PUBLIC WORKS DEPARTMENT, Sol Jacobsen

- There was not a landscape plan for the park and the residential lots and we would like to see it. We have a street tree requirement and Curt said in the CC & R agreement states every house will have to get a tree and I am wondering if all the houses in phase I, have trees. Sol said very few of the houses in phase I do. Curt said it was part of their purchase agreements to have one tree planted. Sol said occupancy will not be granted until the trees are put in and there are 33 lots for 45 trees required because you have 10 corner lots, which would require a tree on either side. I wanted to let you know about this now so there is not a misunderstanding later in the project. Bryan said the Code states the developer is responsible for street trees. The developer is not responsible for driveways or curbs and you could make that the responsibility of the contractor or homeowner, but it says street trees are a developer's responsibility and we have not done well so far and what we would like you to do is volunteer and let the City be in charge. You need to pay up front for all the street trees and we will plant them. Curt said we do not pay for the street trees it is a Condition of Approval when they buy a lot. Bryan said we understand, but we need to get the developer to be responsible for the cost of the trees, not the homeowner. Curt said the issue would be the timing, when do you put the tree in and Bryan stated we would do the timing around the occupancy request. Sol said we would procure the trees and Curt said it would be difficult because it is private property and all you would need is to give them the street tree list and have them plant one from the list. Gordon asked if the trees will be planted behind the sidewalk in some sort of easement. Curt said it would be private and this is an in-fill subdivision, all curb tight sidewalks. Bryan said there is a 12 foot right-of-way easement and you could make it a dual use easement with the utilities. Curt said a public utility easement would allow us to plant trees, but I would prefer a different way to enforce it, we have legal enforcement to get trees now and I can contact the homeowners in phase I and tell them they have 90 days to get their tree in. Bryan said he understood about the CC & R's and were

discussed in phase I, but our Code states we are supposed to do it in a different manner because we do not enforce private CC & R's and you guys do and they did not get enforced and there still are no trees. Curt said we will do it now and I am concerned that the City would choose the trees and not the homeowners. Sol said he would recommend 4 to 5 trees they can choose from and I am not interested in them choosing from 86 different varieties. It would be a mistake and we want some semblance of uniformity. Curt said we have the park strip in this phase and you can dictate what you want in there. On 10th Avenue we may want to have the same trees on both sides and we can put them in our plans. Gary said as long as they are power line friendly on 10th Avenue. Bryan said that is the reason why we want a tree planting plan, then you can take in account of what type of species are in the subdivision. The Code states the developer is responsible and the City has to enforce it and it will happen. Curt said we will work together and get this completed. Sol said his intent is to mark out where the trees will go so we do not have any issues with street lights, sewer laterals, hydrants, water and power lines. Jerry said Tofte Farms is a prime example of how not to plant trees wherever you want, they are next to street lights, street and stops signs to name a few. This is what we have to avoid in the future. Sol said if we make it a condition to have the trees in before occupancy it ensures every single house will have trees in front of it. Curt said we could modify the CC & R's to state a tree will be installed be occupancy permits can be secured. Sol said if you put the money up front, we will purchase the trees, install and maintain them for one year. If that does not happened I will need to look at all the trees before they are put in to ensure they meet our criteria, have good root stock and there placement. Discussion followed on planter strips and placing trees in the strip. The City and Northwood's representatives will discuss this issue at a later date.

- I did not see any detail plan for street signage, I would like to ensure we are using 2 inch square sign posts and the stop sign standards are now 30 inches. In the first phase they were 24 inch stop signs and I wanted to let you know of the differences. V-loc bases are our standardized way of installing sign posts. Curt asked is there a new 2 inch letter height sign with a capital and then small letters. Sol said the County is doing it, but I am not aware of it being a requirement, I have not received an addendum yet. I will check on that. Sol gave Curt the detail.
- The small island were brought up and our preference would be stamped concrete not any planted material. Curt asked what is stated and Jerry said it says landscape vegetation. Sol said hopefully it can be a mountable curb and the Fire Department would appreciate it as well.
- As far as stripping goes we will need to designate the one-ways and we prefer thermo-plastic and have an arrow at the beginning one-ways, just like we did on NE 3rd and NE 4th Avenues. Make sure we have thermo-plastic stop bars put down by all the stop signs.
- At all the dead ends we prefer to use 2 inch square metal posts and use the diamond marking style (Sol handed the print out to Curt) and typically we use three, one in the middle and two on either travel lane and eliminates through traffic.

CITY OF CANBY, PUBLIC WORKS, Jerry Nelzen

- We talked about moving the sewer line coming off of NW 10th Avenue and moving the manhole up so we can have a straight shot for cleaning.

- The sidewalks and ADA ramps on 10th Avenue will that be concrete area? Curt said I think the sidewalk is stand alone and is going through the islands with plantings. Jerry said would you entertain stamping it also to avoid people driving through the landscape. Curt said if you want to do that why not carry the sidewalk around, I do not think we need a 12 to 15 foot concrete sidewalk there. Jerry said we would maintain it and Curt said yes. Jerry stated we would prefer it be concrete along where the cars would be driving over the curb and not into any type of landscape. Curt said we can get rid of the planter area if you want and Jerry said yes.
- At the end of your sewer main lines, you have it notated an 8 inch clean out and if we could extend a short piece of pipe 3 to 5 feet in length because our sewer cleaner gets hung up and we have to cut the street to remove our cleaner.
- I see on the plans you have native backfill and I do not know if this is in the street or on the lots. Curt said you would have to talk to Hassan and ask if we used any native backfill. Jerry said we have some deep lines and it is good sandy soil. Let us talk about it later and how we are going to get compaction, if we decide to go that route.

CITY OF CANBY, PLANNING DEPARTMENT, Bryan Brown

- Bryan asked if they had a homeowner's association. Curt said no, we gave up a few things to accomplish it. Bryan said while dedicating "Tract B" as a City park and not having any drainage swales, I guess you are able to get away without having a homeowner's association because you do not have a common area. Curt said we gave up the well and a water feature to achieve it.
- I would like to ask you about the curb cuts and driveways for each home, has it always been the practice you pave the streets and have the curb there and then you go back and cut it out. Curt said yes, cut it out roll down for the excavation. Bryan said he just wanted to make sure he understood the process. Your design is to keep all the driveways off of the one-way sections of N Elm Street. Curt agreed. Bryan said that is why you did these 2 to 3 easements and this causes homeowners to look at your lots with some indifference, but the intent is to make use of the alternative means of access. Curt said the reason we do not have driveways off the one-way Elm Streets is we did not want to diminish the grass size of the park and did not want a garage face to take up half of the front of their house. We required their houses will only have a sidewalk down to join the sidewalk on N Elm Street and this corridor will go from the big park to the Catholic Church, should be 80 feet of grass in a 120 to 140 width. Bryan said it is an enhancement of the narrow park and Curt said yes.
- Gordon asked if they were going to build the asphalt back onto the accesses. Curt said no, we did talk about it and people should understand what it is supposed to be. We have 3 or 4 lots, which has the access easements.
- Are we positive as a group to do the two asphalt lift? Most developments are not doing that anymore. Curt asked what do they do and the answer was pave the entire streets. Bryan said the reason I am bringing this up is either the developer goes bankrupt or we never get it done, and it takes longer than two or three years, like Postlewait. Curt said I think 10th Avenue would work but the other streets should wait on it. Jerry said there was cutting down to the first lift of your phase I after a year-and-a-half, before the second lift was done. Gordon asked if there was a preference of which way you want to go and Curt said we paved both lifts on

phase I, but only half the houses had been built and we are building the other 20 houses, so we will see what type of damage will occur to the roadway. Bryan said there is a balance between someone building a house and having to wait a year-and-half for the finished roadway. Curt said we have pervious pavement on 10th Avenue and if we have to excavate driveways into the pervious it will make a mess because you lose all the base rock and with that being said I would say we should not do the second lift on 10th Avenue. Jerry said he was thinking about how we would do that with pervious, it will be difficult. Curt suggested putting a mountable curb. Jerry said if you could explain to me how we would do the pervious if we did not do both lifts. Curt said it would be fine, we would do 2-1/2 inch of the larger pervious, doing 3/8's over 1/2 inch with 2-1/2 of base lift dense mix and come back later and do the 1-1/2 of both dense and the 3/8 pervious. Jerry asked how we protect all of that during construction. Curt said how we protect anything, we have our rules in place. Gary suggested to have the driveway approaches already designated and then you would not have to worry about it.

- Bryan asked about street lighting and the consensus was Gary Stockwell would discuss any and all issues with street lights.
- The park itself, who is responsible for it? Curt said we will grade it, build the irrigation system, plant the grass, trees and the sidewalks and not go beyond that. Jerry asked if there will be sidewalk around "Tract B" and Curt said no, we would like to encourage them to have a sidewalk down the middle of the tract. We will have sidewalks on both sides N Elm Street, the outside not on the interior. It would be nice to have a sidewalk in the middle. Bryan said is this park a visible or some other type of activities with the aspect of the land to be developed and who's responsible. By the way, your submittal is a subdivision Type III Application, you are really submitting a preliminary tentative plan, not really a final plat. We can add to the site plan where trees will be planted or various easements added. We would like to see the utility layout. For instance is every lot gravity feed with sewer and the answer was yes. Jerry asked if it was Jeff's decision and Bryan said the additional improvements were the developer's responsibility for the parks development. That did not materialize and we want to make sure we know what improvements we want on this park and/or negotiate for them. Angie stated it would be something discussed at the Planning Commission stage and be a part of the Conditions of Approval. Curt said the development agreement. Bryan said the development agreement actually, if you read it closely Curt, it states you are going to make park improvements. Curt said that is why it states sidewalks, trees and grass.
- The Traffic Impact Study and the development agreement, basically your master plan, it states for every phase you will have to do a new traffic study. The purpose of the traffic study is to study internal circulation and possibly the civil design of the one-way streets and make sure the radius, or the islands on the end are suitable. Curt said it was already done, but we may have to update them since they are 10 years old. Bryan said the sight distances at the new intersections may be a result of problem on existing older lots, which are not part of your development. Those are the reasons we will have a traffic study, how many lots are in this phase and the answer was 33 lots. You will need to decide if you want to do a traffic study with our new consultants for phase II or if there is an advantage in doing an analysis of your one or two additional phases, because otherwise with the master agreement you will have to have a traffic study for each phase. We can try to come to an agreement on a very

minimal analysis such as sight distances. I talked to our Traffic consultant and the volume is not really an issue because the local streets in that area can take 172 additional trips, which this phase will generate. Curt said we will work with you. Bryan said if you want this to keep moving you will need to give us a check for \$500 to do a scoping. We can do that between the Traffic consultant, us and you and decide what that scope of work will be. We use DKS Traffic Engineers.

- The other thing will be infill designated lots, it would be nice if your narrative or a drawing, could identify those lots which have adjacent single story homes next to them. Curt said they are already identified and they are listed in the development agreement.
- How have you handled the master fee provision? You pay 0.4% of the public improvement costs. Curt said he never heard of it. Bryan said he thought that was a possibility and why I am mentioning it. The intent is to cover the City's review of the construction of public improvements and we will need to collect it. Curt said we talked about this for 15 years in Canby and I did not know you put it in place. Bryan said it is very clear on our master fee schedule now.

CITY OF CANBY, PLANNING DEPARTMENT, Angie Lehnert

- Angie said if you look at Chapter 16.120 in the Code it says an open space plan shall be submitted and designated what areas, manner in which the open space shall be perpetrated, maintained, etc. Curt said he had a dozen park layouts and was shut down on all them and was told we have no input on them.
- I made a list of the chapters in the Code for us to look at. Curt said I would like to know more for putting together the application and asked for a copy and Bryan said I forwarded you a copy and asked Angie if she wanted to add to it. Angie stated fill out the application form, pay the fees, show the street connections and the cross sections of the sidewalks. We would like to see the lots sizes and widths. Do a narrative and make sure the plans show whatever is required by Code.

WAVE BROADBAND, Dave Michaud

- I need a trench design for our facilities. Curt asked Dave if there was anything on the plans and Dave stated he did not see anything.

CANBY UTILITY, ELECTRIC DEPARTMENT, Gary Stockwell

- Our fee structure has changed since phase I was established. We used to have a flat rate per lot, flat rate for street lights and now we charge actual. I will develop a cost up front and you will need to pay it. If the cost comes under we will reimburse you.
- We have had some discussions with Public Works and yourself in regards to the street lighting. The manufacturer making cobra heads has a variety of LED's, we already have some test LED lights in service, which have met with good reviews. You will be paying for the actual costs for the lights, I can order a cobra head LED for this application and Curt said that is what we would like to do.
- In the past I have always drawn in street light locations for the subdivision because I am aware of the closest place to serve them. Bryan, we do not do photometrics and Bryan said it would be nice if you could assist in laying out a street light plan, turning it in for Planning

Commission's review. Curt said we will do the photometrics for you Gary, if you will work together with us.

- I will layout the design for the points of contact for the subdivision electrically and for the street lights. Curt asked if there was a City standard light levels. Angie said yes we do in the Lighting Chapter. Gary said the current standard has been built with a maximum of 200 foot spacing based on a 150 watt high pressure sodium. A maximum of 200 feet is reduced at intersections and curves and of course due to lot sizes and uniformity we make them fit with a maximum of 200 feet. The question on the new LED's with the photometrics do we want to go with a 150 watts equivalent which is 70 or do we want to drop down to the 40? Curt said we can look at the lumens and compare them and find out what is the best lighting level option to the high pressure lights. Gary said the lights we have on Sequoia Parkway are at a 30 foot mounting height and these will be at a 24 foot mounting height.
- Jerry asked if the lighting in the park private? Curt said they are City owned. Gary said I am designing a system to light the streets and Jerry said the park lights will be metered. Gary said yes.
- In phase I there was a service request in the park and we planned for it and placed conduit for you. Do you know of any needs for this park because I will need to know where to place conduit in for you, so they do not have to cut the street. It is something to think about and let me know your decision. Gordon said why not put a service there in case you need one in future. Jeff said he would discuss it when it was his turn to talk and address all of them.
- When I start laying out the design for tie ins, I may have to request addition easements where I will actually use up a side or rear lot line to tie into. I want your aware we may make it a requirement.
- I looked at this plan and it may be the size of this plan, but I could not see the power poles. Are there any pole conflicts. Gary asked Curt if he could get him a composite utility plan, so he can see if there are any conflicts. The addition or deletion of one lot can completely destroy a subdivision plan and I would like to know if the City is going to accept this phase design. Curt said this is unique and I do not think there will be any changes and Bryan said that is the issue because of the master plan and this is why I am hesitant on doing much of a traffic analysis. We are not changing the design of the streets because it was planned out. Curt said it is pretty much fixed and I cannot imagine any changes. Gary said he would get the design laid out and go from there.
- You are not going to redesign the sidewalks? They will stay curb tight. Curt said we will be redesigning the intersection at N Elm and 10th and there is a planter strip on 10th. Jerry said he is seeing the power pole in the planter and Curt said the existing power poles and the answer was yes.
- What is your proposed timeline? Curt said it depends on what the economy does this year, but most likely it will be the spring of 2014.

CITY OF CANBY, PARKS DEPARTMENT, Jeff Snyder

- I would assume this is dedicating ownership again and it will be a part of the park. The answer was yes.
- I do not have a detail sheet and I will recap some of the discussions. I did not notice sidewalks around the green space/boulevard. Curt said we did not do anything there, all you

have to do is tell us what you want us to do. Jeff said he would like to see sidewalks around the green space and Curt said he would get Jeff some sketches. Discussion ensued about sidewalks. Jeff wanted to have a sidewalk around “Tract B” to protect the irrigation heads and not be driven upon. Curt said we would like to minimize the hardscape and have more grass. Jeff said if the grass area is 75 feet wide and had a sidewalk we would still be looking at 63 feet of turf. This would be more of a pass through or where the kids could play catch. Curt said we could put a 24 inch sidewalk and Jeff said that would be fine, but I still need a way to access it. Jerry asked where would you park your truck. Jeff said I would have to park a vehicle at the park from phase I. Unless we develop some type of a pull off and Jerry asked like the pull off at Triangle Park.

- Where were you planning on getting the water for the irrigation and Curt said we would stub it across from the other park. Was it a 2 inch or 3 inch service and Jeff stated a 3 inch service. Jeff said do you plan on using the existing time clock on Northwoods. Curt said I thought I heard you discuss a new electric service on the south end and you want to run everything off the time clock and the water supply. I know it would be a long run electrically for secondary power, if you do not have any high power needs you might be able to pull it off that one meter. You will have conduit and routing for all the stuff to the park and you could do it either way. Jeff said I do not think we need lighting because we will have lighting along the street around it and on both sides of it. So it would be ambient lighted.
- My request for irrigation is rainbird time clocks, schedule 40 pipe, all valves on unions and risers, rainbird heads, all the swing joints to be rainbirds, tracer wire to be 14 gauge on all main and lateral lines.
- On the island landscaping at the end of N Elm Street and NW 10th Avenue, I can foresee it being driven through and I would agree it would need to be changed. Curt said yes, stamped concrete.
- I saw a valve on lot 65 and I was wondering if we were going to have utilities in the park area? Curt said it was really hard trying to get the utilities to the cross streets without going through the parks. Jeff said I realize you have to go through your easements, but I was saying there was a valve here and Curt said we can pull that. Gordon said it has more to do with the scaling.
- I would like to utilize our Arborist for the tree selection and I would rather see a row of trees in the middle to make it look more like a boulevard.
- Bryan asked is there any lighting in the park different than the cobra street lighting? Jeff said if we are going to pull all the irrigation and the time clock from the other park, I do not know if we have need for power and I would be fine with the ambient lighting. Curt said we could over size the wire to get 20 amps for something if you needed it. Jeff said we could plan for it and have a pedestal at the south side. Curt said whatever you decide. Gary said he could put a service in the middle run of the park and if you wanted some type of lighting it would not be that far. Jeff said pulling a line from the north side of the park. Gary said no that would not work pulling a line that far and Jeff said then we would want a pedestal. If we are talking about a separate electrical service, what about another new water service and Curt said the 3 inch water service to Northwoods Park was an atrocious cost, something like \$40,000. Gordon stated with a 3 inch line you can get the water to the south side of the park without any problems. Gordon asked if they wanted to have a fountain in this park, if you

did you would need another service. It would be 3/4 x 5/8 inch meter. Curt said it would be nice to have a water feature. Gordon said it would be a good idea to put in another service at this end of the park, just in case. Jeff asked who was going to pay for it and Curt said we would be installing it, but it would be a good idea to have a sewer and water service stubbed in the park area. Bryan asked if you could install a water pipe to the park, but not install a meter. Jerry said we did this on 1st Avenue and had Doug pull the meters. The SDC's are paid and it will cost us \$150.00 to re-install the meter. Jeff asked what the SDC's were on a 3/4 x 5/8 inch meter and Doug said \$3,333.00 for potable water. Jeff said you can put a water line in, but I will not put a meter in yet.

CANBY UTILITY, WATER DISTRIBUTION DEPARTMENT, Doug Quan

- Since you have two 8 inch water lines going through this park anyway, it does not matter if you put in a line or not because you do not have to go into the street. Jerry said the same with sewer.
- The water line in NW 10th Avenue, they originally asked you for a 10 inch line, last year we up sized the water main in NW 9th Avenue to an 8 inch, you do not have to put it in a 10 inch line, you can down size it to an 8 inch line. Since you are connecting 10th Avenue all the way through, we would like to carry the 8 inch through to N Birch and N Grant Street intersections to make the connection, because otherwise you will be tying into a 6 inch on both ends and that is not good for flow. Jerry said you want to cut N Grant Street? Doug said yes.
- No hydrant locations were shown on your drawings and Gordon said there are some, but there are none shown on 10th Avenue. I did not see them, so if you get those put in the plans.
- The cul-de-sac, "B" Street as it is marked, you could run an 8 inch pipe through the park and then put a 4 inch pipe in the corner and carry the rest down. We do not want to see an 8 inch line dead end there because it could cause stagnation problems and we do not want that for the homeowners.
- This does not have anything to do with this portion of phase II, but with phase III where you are making the other two cul-de-sacs off of NW 11th that is the worst dead ends for us. As you are designing it, we can take NW 11th through to N Birch Street or go through NW 10th Avenue. Curt said we can loop the 8 inch around to NW 10th Avenue and Doug said we like to have the system looped whenever possible. Then the one short cul-de-sac can be dropped to a 4 inch to keep better water quality. Discussion followed on looping the water system in phase III.

NORTHWOOD ESTATES II PHASE II

CITY OF CANBY,
CLACKAMAS COUNTY, OREGON
FEBRUARY 2010

GENERAL NOTES

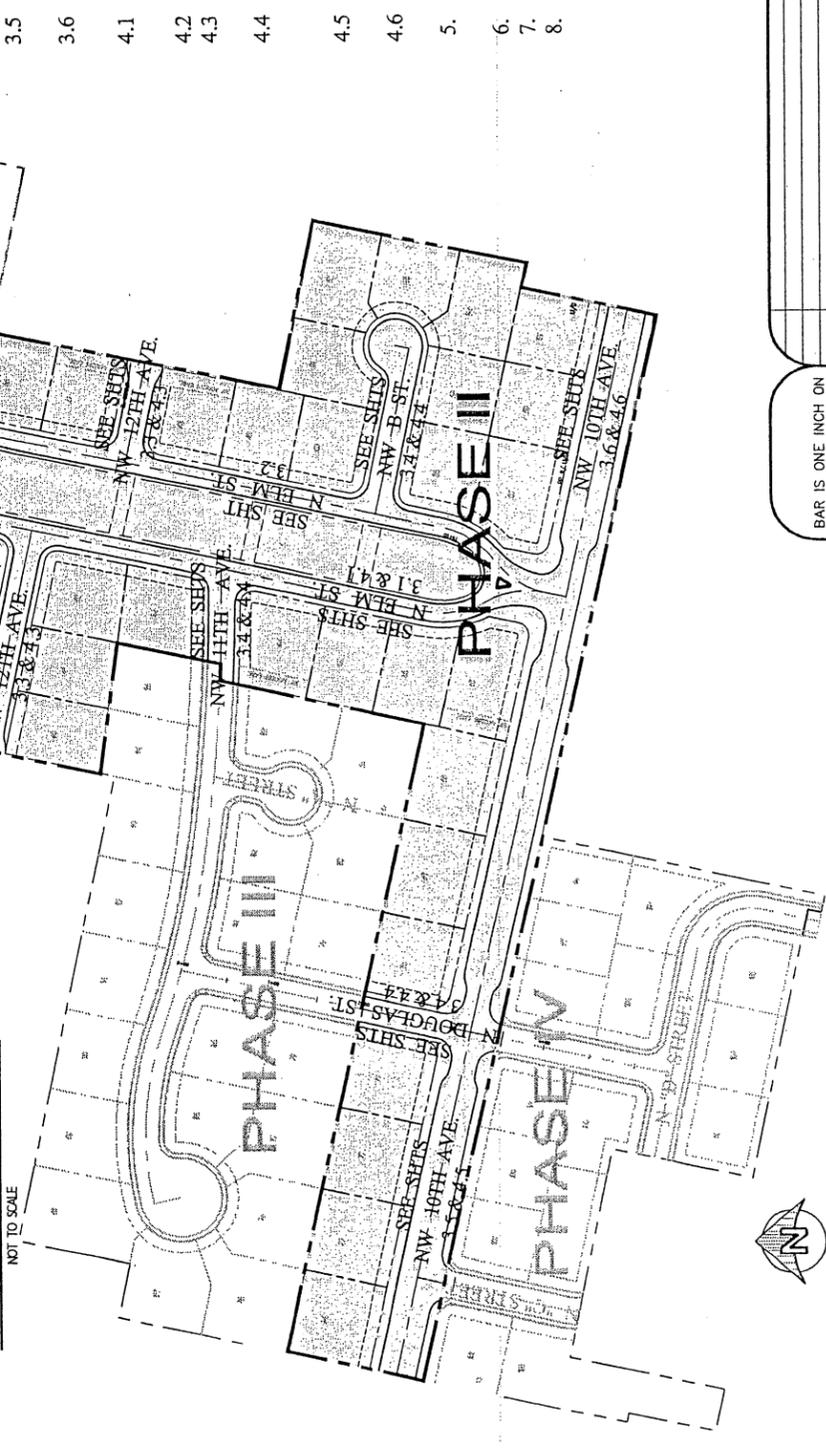
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF CANBY, AND CANBY UTILITY, AS APPLICABLE, AND THE CURRENT VERSION OF THE APWA/ODOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. THE EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON FIELD SURVEYS BY THE CONTRACTOR. THE CONTRACTOR MUST FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION SYSTEM (OUS) THROUGH OHR 952-001-0008. COPIES OF THE RULES MAY BE OBTAINED BY CALLING THE CENTER AT 503-232-1987 OR 1-800-332-2344.
3. CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY TRAFFIC CONTROL SIGNING AND PROTECTION IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO ANY CONSTRUCTION.
4. CONTRACTOR SHALL SECURE ALL PERMITS AND APPROVALS PRIOR TO INITIATING ANY CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE WITH PUBLIC AND PRIVATE UTILITY PROVIDERS TO INSTALL SERVICES REQUIRED. CONTRACTOR SHALL EXCAVATE ALL TRENCHES REQUIRED FOR PRIVATE UTILITIES (CANBY UTILITY, NWNG, CANBY TELEPHONE, CABLE TV) AND BACKFILL WITH CRUSHED ROCK IF UNDER OR WITHIN 5' OF TRAVELED SURFACE, OR NATIVE MATERIAL IN ALL OTHER LOCATIONS.
6. ALL CONSTRUCTION ACCESS SHALL BE FROM NW TERRITORIAL ROAD. DO NOT REMOVE SIDE STREET FENCES OR BARRICADES UNTIL COMPLETION OF THE WORK.

SHEET INDEX

1. COVER SHEET / SITE INDEX
- 2.1. EROSION CONTROL PLAN / CONCEPTUAL SITE GRADING PLAN
- 2.2. COMPOSITE UTILITY & STREET LIGHTING PLAN
- 3.1. N ELM STREET (WEST) STREET & STORM PLAN & PROFILE
- 3.2. N ELM STREET (EAST) STREET & STORM PLAN & PROFILE
- 3.3. NW 12TH AVENUE STREET & STORM PLAN & PROFILE
- 3.4. NW B, N DOUGLAS STREET & NW 11TH AVE STREET & STORM PLAN & PROFILE
- 3.5. NW 10TH AVENUE (WEST) STREET & STORM PLAN & PROFILE
- 3.6. NW 10TH AVENUE (EAST) & C STREET STREET & STORM PLAN & PROFILE
- 4.1. N ELM STREET (WEST) - SANITARY SEWER & WATER PLAN & PROFILE
- 4.2. NOT USED
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- 4.4. NW B, N DOUGLAS STREET & NW 11TH AVE - SANITARY SEWER & WATER PLAN & PROFILE
- 4.5. NW 10TH AVENUE (WEST) - SANITARY SEWER & WATER PLAN & PROFILE
- 4.6. NW 10TH AVENUE (EAST) & C STREET SANITARY SEWER & WATER PLAN & PROFILE
5. STREET SECTIONS AND GENERAL CONSTRUCTION NOTES
6. DETAIL SHEET
7. DETAIL SHEET
8. DETAIL SHEET

CITY OF CANBY VICINITY MAP

NOT TO SCALE



DEVELOPMENT PROPERTY

PORTION OF TAX MAP 35E3240
35E3888
TAX LOTS 100, 200 & 1700
501

ENTIRE TAX MAP 35E388C
6600

OWNER

NORTHWOOD INVESTMENT
1127 NW 12TH AVENUE
CANBY, OREGON 97013

CANBY FILE NO.

SUB 05-12

ENGINEER

CURRAN - McLEOD, INC
CONSULTING ENGINEERS

6655 SW HAMPTON, SUITE 210
PORTLAND OREGON 97223
PHONE: 503-684-3478
FAX: 503-624-8247

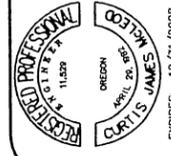
APPROVED FOR CONSTRUCTION BY:	DATE:	COMMENTS:
PLANNING		
PUBLIC WORKS		
WATER		
ELECTRIC		
TELEPHONE		
CABLE		
GAS		
FIRE		
CITY ENGINEER		
CITY PARKS		

PRELIMINARY

DATE	FEB 2010
PK	1391
USE	CJM
DES	RCD
JOB#	1391-COVER-01

NORTHWOOD ESTATES, PHASE II
COVER SHEET
SITE INDEX
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST, SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478



TOPOGRAPHY SURVEY HAS BEEN PROVIDED BY ZTEC ENGINEERS, INC. ELEVATIONS ARE BASED ON USC&GS BM A14 IN FIRST STEP OF KELLY BROS. REALTY AND INSURANCE BUILDING AT NW 1ST AVE & N GRANT STREET. STAMPED ELEVATION = 152.67 (NGVD 1929 ADJUSTED DATUM).

NO.	REVISIONS	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

PHASE II - SITE LAYOUT
SCALE: 1"=100'

EROSION / SEDIMENTATION CONTROL NOTES

CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

THE IMPLEMENTATION OF THESE ESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR, AND UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION/LANDSCAPING IS ESTABLISHED, THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THE PROJECT IS ACCEPTED.

THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LOADED WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS OR VIOLATE APPLICABLE STANDARDS.

THE ESC FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LOADED WATER DOES NOT LEAVE THE SITE.

THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

CONTRACTOR IS REQUIRED TO KEEP WRITTEN INSPECTION LOGS.

AT NO TIME SHALL THE SEDIMENT BE ALLOWED TO ACCUMULATE MORE THAN 1/3 THE BARRIER HEIGHT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT LOADED WATER INTO THE DOWNSTREAM SYSTEM.

STABILIZED GRAVEL ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE PROTECTED FROM THE DURATION OF THE PROJECT. ACCESS POINTS SHALL BE LIMITED TO TERRITORIAL ROAD FRONTAGE.

STORM DRAIN INLETS, BASINS AND AREA DRAINS SHALL BE PROTECTED UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.

PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.

SEEDING OR HYDRO-SEEDING SHALL BE COMPLETED PRIOR TO SEPTEMBER 1.

IF THERE ARE EXPOSED SOILS OR SOILS NOT FULLY ESTABLISHED FROM OCTOBER 1ST THROUGH APRIL 30TH, THE WET WEATHER EROSION PREVENTION MEASURES WILL BE IN EFFECT.

THE CONTRACTOR SHALL REMOVE ESC MEASURES WHEN VEGETATION IS FULLY ESTABLISHED.

ALL EROSION CONTROL MEASURES SHALL COMPLY WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SEDIMENT FENCE STANDARD NOTES

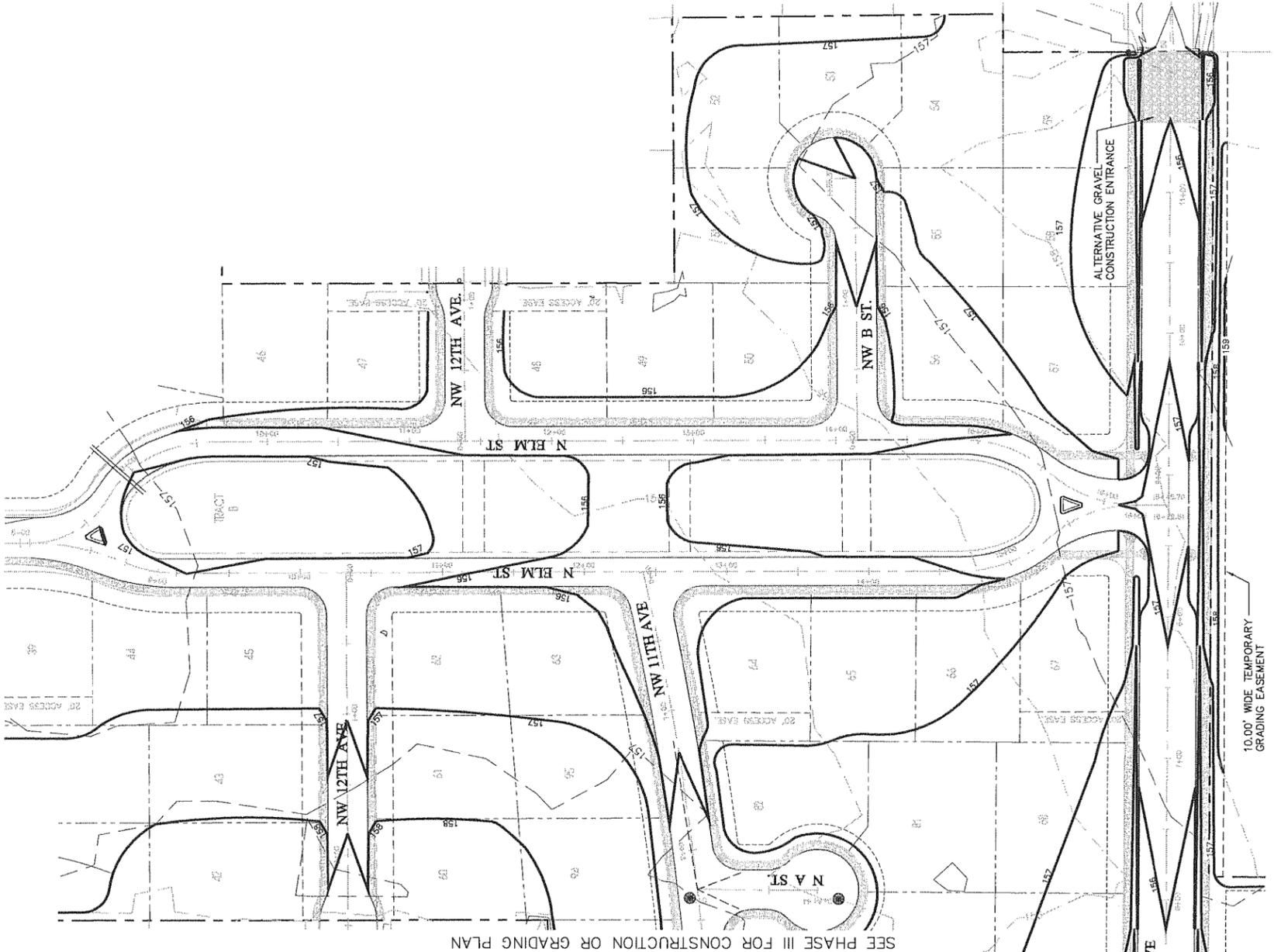
1. STANDARD OR HEAVY DUTY SEDIMENT FENCE FILTER FABRIC SHALL HAVE MANUFACTURED STITCHED LOOPS WITH 2" x 2" x 4" POSTS.
2. TRENCH SHOULD BE EXCAVATED 6 INCHES DEEP ALONG THE LINE OF THE POSTS. TRENCH SHOULD BE BACK FILLED AND THE SOIL COMPACTED ON BOTH SIDES OF THE SEDIMENT FENCE.
3. POSTS SHOULD BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES.
4. WHEN SEDIMENT FENCE APPROACHES ITS TERMINATION POINT, TURN FENCE UPHILL AND EXTEND ONE FULL PANEL (6 FEET).
5. WHEN JOINING TWO OR MORE SEDIMENT FENCES TOGETHER, JOIN THE TWO END STAKES BY WRAPPING THE TWO ENDS AT LEAST ONE AND A HALF TURNS AND DRIVING THE JOINED STAKES INTO THE GROUND TOGETHER.
6. HEIGHT OF A SEDIMENT FENCE SHOULD NOT EXCEED 3 FEET. STORAGE HEIGHT AND PONDING HEIGHT SHOULD NEVER EXCEED 1.5 FEET.
7. CONTRACTOR SHALL MAINTAIN SEDIMENT FENCE AT ALL TIMES.

INSPECTION AND MAINTENANCE

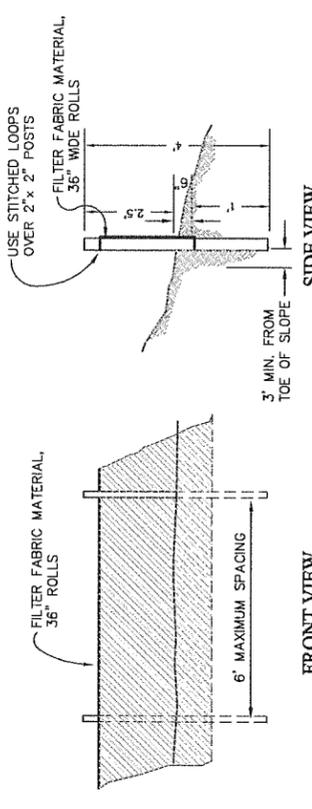
1. INSPECT DAILY ON ACTIVE SITES, ONCE EVERY TWO WEEKS ON INACTIVE SITES, AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT.
2. IMMEDIATELY REPAIR ANY DAMAGE.
3. REMOVE ACCUMULATED SEDIMENT ONCE IT HAS REACHED A MAXIMUM OF 10 INCHES.
4. INSPECT FOR CHANNEL FORMATION PARALLEL TO THE FENCE, WHICH INDICATES THAT THE GEOTEXTILE IS ACTING AS A FLOW BARRIER.
5. REPLACE DETERIORATED OR CLOGGED GEOTEXTILE.
6. CHECK FOR UNDERCUTTING OR PIPING UNDER FENCE.

TEMPORARY GRASSES AND PERMANENT VEGETATIVE COVER

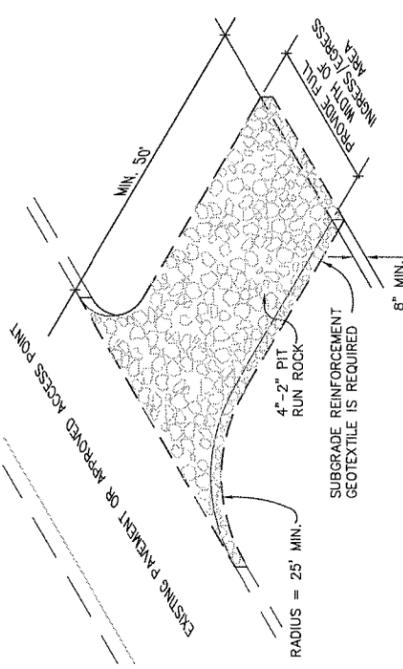
- A. TEMPORARY GRASS COVER MEASURES MUST BE FULLY ESTABLISHED BY NOVEMBER 1 OR OTHER COVER MEASURES WILL HAVE TO BE IMPLEMENTED UNTIL ADEQUATE GRASS COVER IS ACHIEVED. TO ESTABLISH AN ADEQUATE GRASS STAND FOR CONTROLLING EROSION BY NOVEMBER 1, IT IS RECOMMENDED THAT SEEDING AND MULCHING OCCUR BY SEPTEMBER 15 (OR EARLIER WHERE APPROPRIATE). (SEE ATTACHED PRE-ESTABLISHED GRASS SEED.)
- B. HYDROMULCH SHALL BE APPLIED WITH GRASS SEED AT A RATE OF 2000 LB./ACRE ON SLOPES STEEPER THAN 10 PERCENT, HYDROSEED AND MULCH SHALL BE APPLIED WITH GRASS SEED AT A RATE OF 1000 LB./ACRE ON SLOPES LESS THAN 10 PERCENT. APPLICATION RATE: 100 POUNDS PER ACRE. SEEDING-RECOMMENDED EROSION CONTROL GRASS SEED MIXES ARE AS FOLLOWS. SUBSTITUTES IF APPROVED BY JURISDICTION.
 1. DWARF GRASS MIX (LOW HEIGHT, LOW MAINTENANCE): DWARF PERENNIAL RYEGRASS, 80 % BY WEIGHT, CREEPING RED FESCUE, 20 % BY WEIGHT APPLICATION RATE: 100 POUNDS MINIMUM PER ACRE.
 2. STANDARD HEIGHT GRASS MIX ANNUAL RYEGRASS 40% BY WEIGHT, TURF TYPE FESCUE, 60% BY WEIGHT, APPLICATION RATE: 100 POUNDS PER ACRE.
- C. FERTILIZATION FOR GRASS SEED - IN ACCORDANCE WITH SUPPLIER'S RECOMMENDATIONS.
- D. WATERING-SEEDING SHALL BE SUPPLIED WITH ADEQUATE MOISTURE TO ESTABLISH GRASS. SUPPLY WATER AS NEEDED, ESPECIALLY IN ABNORMALLY HOT OR DRY WEATHER OR ON ADEQUATE MOISTURE WITHOUT CAUSING RUNOFF.
- E. RE-SEEDING - AREAS WHICH FAIL TO ESTABLISH GRASS COVER ADEQUATE TO PREVENT EROSION SHALL BE RE-SEEDING AS IDENTIFIED, AND ALL APPROPRIATE MEASURES TAKEN TO ESTABLISH ADEQUATE COVER.
- F. AT THE END OF SITE CONSTRUCTION, PAVING APPROVED PERMANENT SITE LANDSCAPING OR ESTABLISHMENT OF A HEALTHY STAND OF PERMANENT VEGETATION (AS IDENTIFIED, AND ALL APPROVED) MUST OCCUR PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.



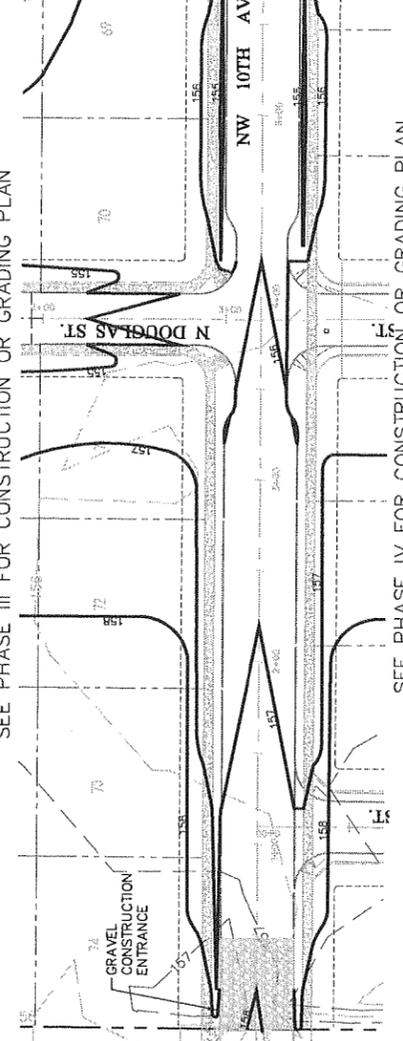
SEE PHASE III FOR CONSTRUCTION OR GRADING PLAN



SEDIMENT FENCE DETAIL
 N.T.S.



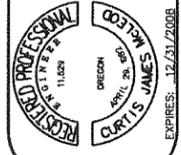
SEE PHASE III FOR CONSTRUCTION OR GRADING PLAN



SEE PHASE IV FOR CONSTRUCTION OR GRADING PLAN

EROSION CONTROL PLAN / CONCEPTUAL SITE GRADING PLAN
 SCALE: 1"=50'

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.



CURRAN-MCLEOD, INC.
 CONSULTING ENGINEERS
 6655 SW HAMPTON ST. SUITE 200
 PORTLAND, OREGON 97223
 PHONE 603-684-3478

REV.	DESCRIPTION	REVISION BY	DATE

REVISIONS

PRELIMINARY

NORTHWOOD ESTATES, PHASE II

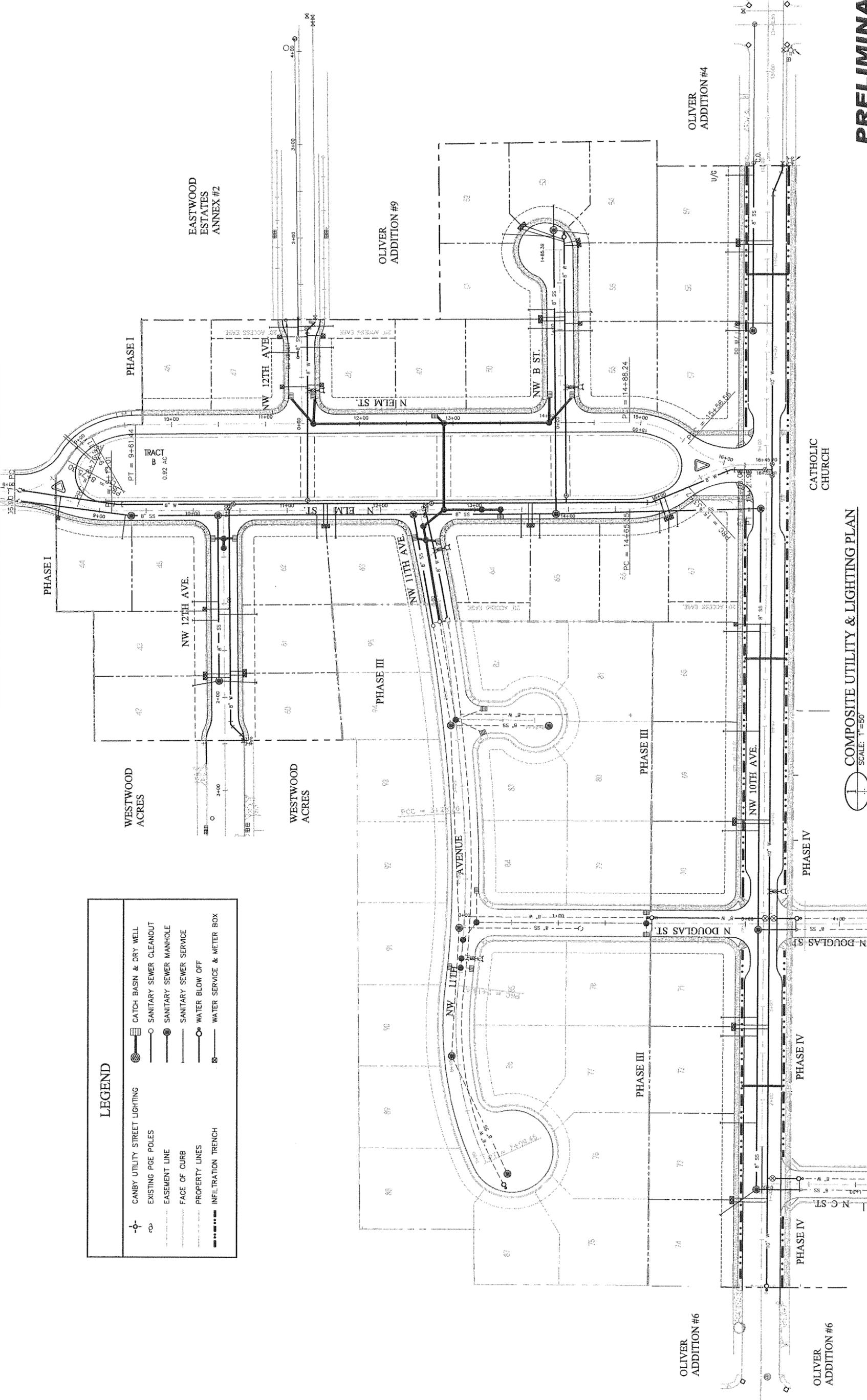
**EROSION CONTROL PLAN
 CONCEPTUAL SITE GRADING PLAN**

CITY OF CANBY
 CLACKAMAS COUNTY, OREGON

DATE	FEB 2010
BY	1391
CHKD	COLM
REV.	RCO
PROJECT	044391-SHEET2-1

2.1 OF 8

LEGEND	
	CANBY UTILITY STREET LIGHTING
	EXISTING PGE POLES
	EASEMENT LINE
	FACE OF CURB
	PROPERTY LINES
	INFILTRATION TRENCH
	CATCH BASIN & DRY WELL
	SANITARY SEWER CLEANOUT
	SANITARY SEWER MANHOLE
	SANITARY SEWER SERVICE
	WATER BLOW OFF
	WATER SERVICE & METER BOX

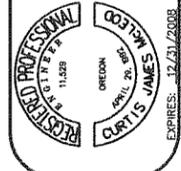


COMPOSITE UTILITY & LIGHTING PLAN
SCALE: 1"=50'



BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISIONS	DATE



CURRAN-MCLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST. SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478

PRELIMINARY
NORTHWOOD ESTATES, PHASE II
COMPOSITE UTILITY & STREET LIGHTING PLAN
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

DATE	FEB 2010	1391
BY	CJM	2.2
CHKD	RCO	OF
DATE	04/29/11	8
BY		

J:\Canby\1391-NWood\PHASE II.dwg 1391-SHEET2-2.dwg, 2/22/2010 11:56:58 AM

No.	RADIUS	Δ	LENGTH	CL
1	150.00'	27°31'58"	56.37'	96.04'
2	STATION	OFFSET	T.C. ELEVATION	
3	7+97.42 PC	10.00 RT	156.68	
4	8+30.22 PCC	N ELM ST (W)	156.75	
5	MA		156.82	
6	MA		156.89	
7	8+57.19 PRC	N ELM ST (W)	156.89	
8	MA		156.96	
9	10+45.71 PT	N ELM ST (W)	156.96	

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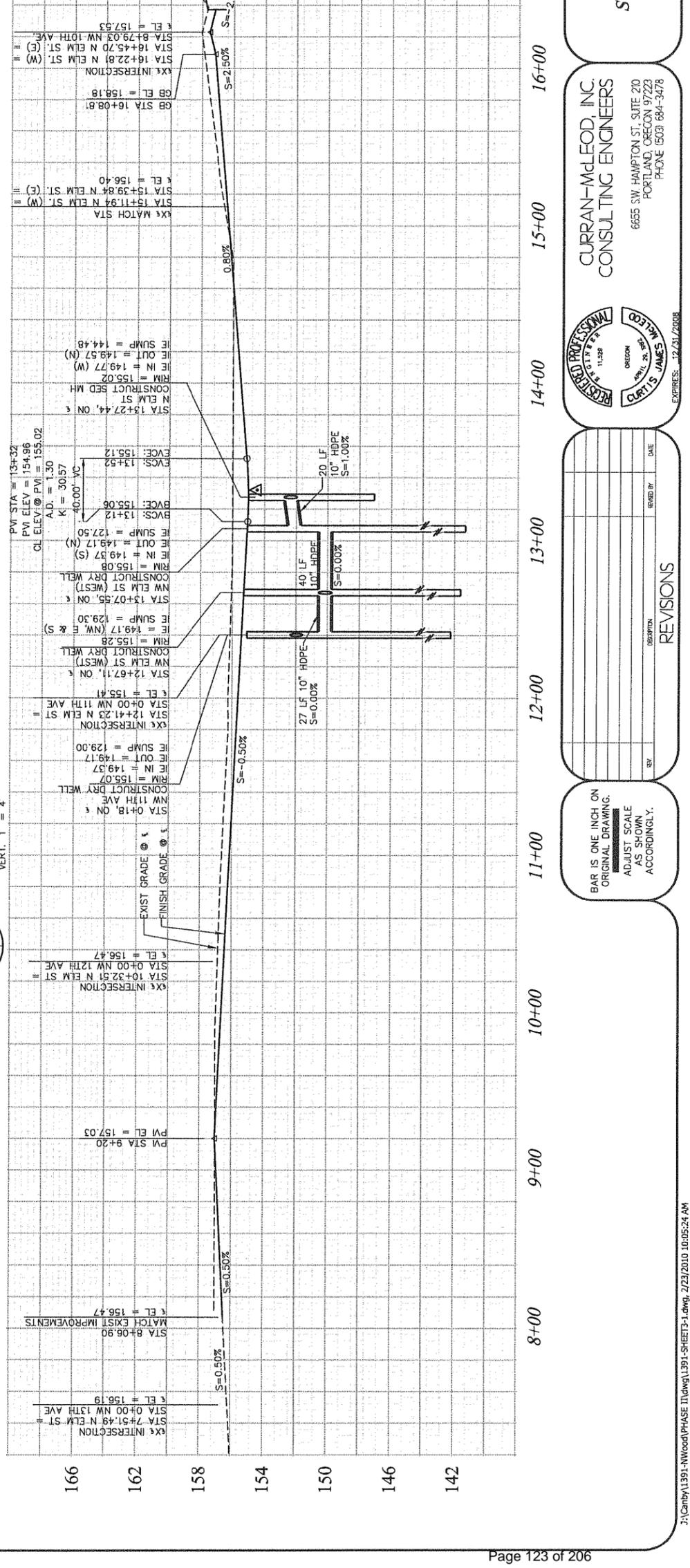
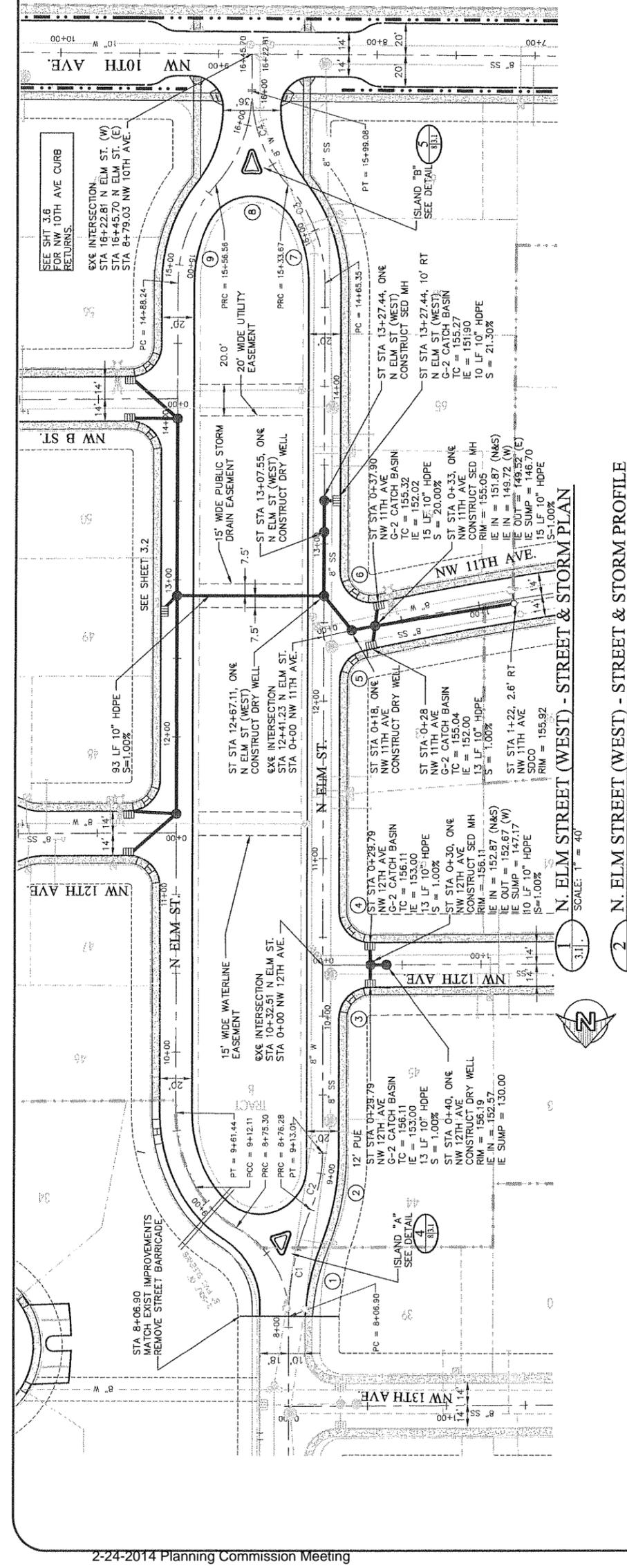
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CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	Chord Bearing
C1	69.38'	170.00'	N11°37'49"
C2	36.73'	90.00'	S11°37'49"
C3	66.32'	94.00'	S20°52'60"
C4	65.41'	90.00'	N20°52'60"



PRELIMINARY

NORTHWOOD ESTATES, PHASE II
N ELM STREET (WEST)
STREET & STORM PLAN & PROFILE

CURRAN-MCLEOD, INC.
 CONSULTING ENGINEERS



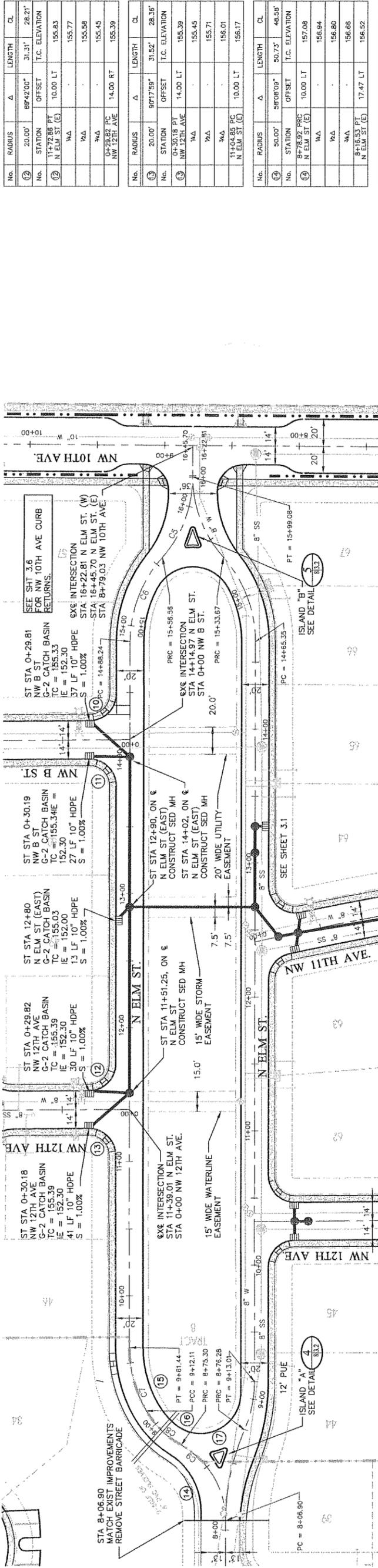
6655 SW HAMPTON ST., SUITE 200
 PORTLAND, OREGON 97223
 PHONE (503) 684-3478

NO.	DESCRIPTION	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

REVISIONS

DATE: FEB 2010
 3.1 OF 8

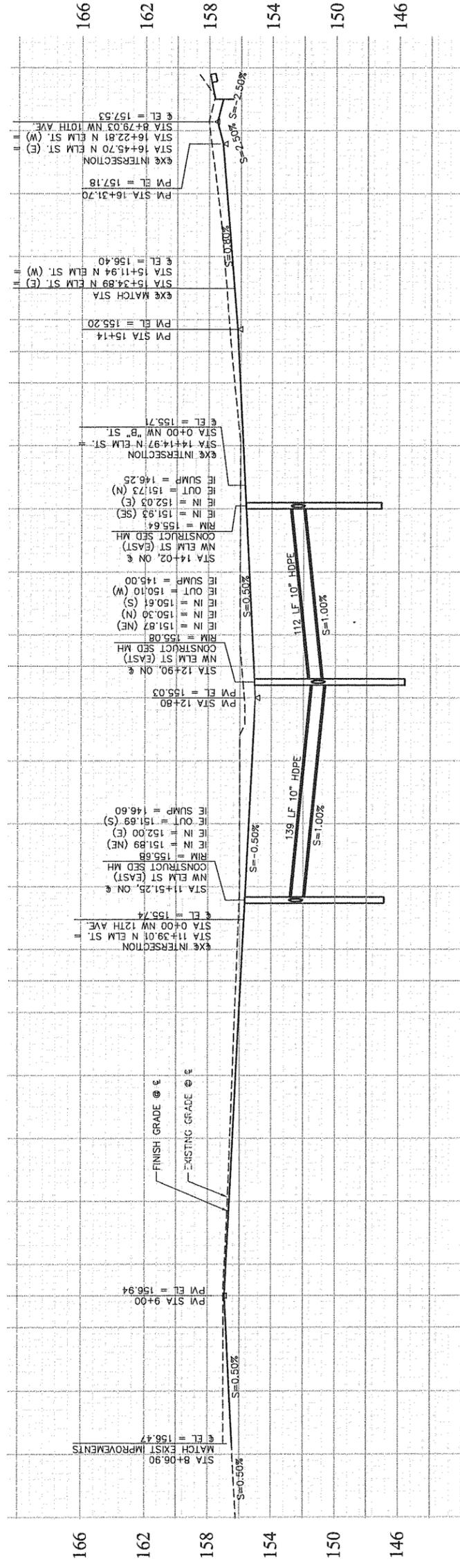


1. N. ELM STREET (EAST) - STREET & STORM PLAN
SCALE: 1" = 40'

2. N. ELM STREET (EAST) - STREET & STORM PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

No.	RADIUS	Δ	LENGTH	CL
10	20.00'	89°12'00"	31.31'	28.21'
No.	STATION	OFFSET	T.C. ELEVATION	
10	14+48.86 PT	10.00 LT	156.12	
11	14+30.19 PT	14.00 LT	155.34	
12	14+00.00		155.39	
13	14+00.00		155.55	
14	14+00.00		155.72	
15	14+00.00		155.78	

No.	RADIUS	Δ	LENGTH	CL
16	50.00'	58°08'09"	50.73'	48.58'
No. <td>STATION</td> <td>OFFSET</td> <td>T.C. ELEVATION</td> <td></td>	STATION	OFFSET	T.C. ELEVATION	
16	8+28.82 PC	10.00 LT	157.08	
17	8+16.33 PT		156.84	
18	8+00.00		156.80	
19	8+00.00		156.68	
20	8+00.00		156.52	



CURVE	LENGTH	RADIUS	Chord	Chord Bearing
C5	65.41'	90.00'	63.98'	S20°45'40"W
C6	68.32'	94.00'	66.83'	N20°46'46"E
C7	49.34'	95.00'	48.78'	N14°56'18"W
C8	36.81'	67.00'	36.35'	N45°33'18"W
C9	68.40'	64.00'	65.19'	S30°40'39"E

8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

PRELIMINARY

NORTHWOOD ESTATES, PHASE II
N ELM STREET (EAST)
STREET & STORM PLAN & PROFILE

CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST. SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478



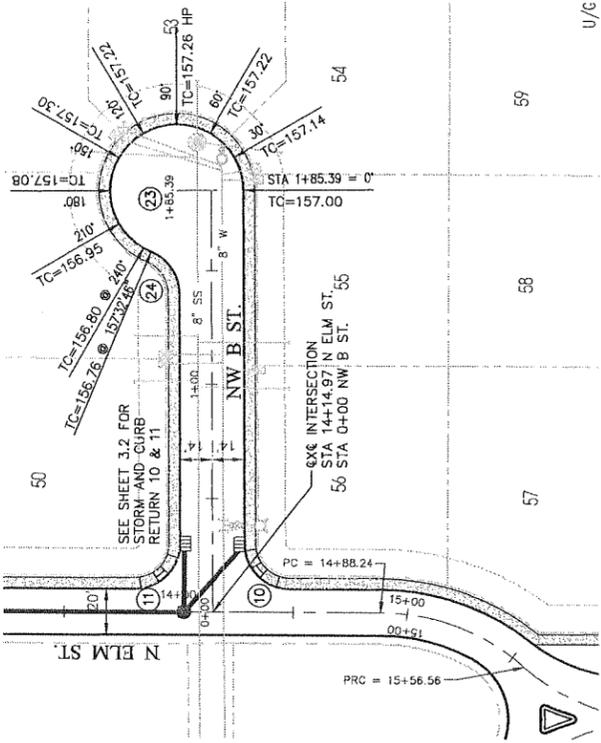
REV.	DESCRIPTION	REVISION BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

3.2 OF 8

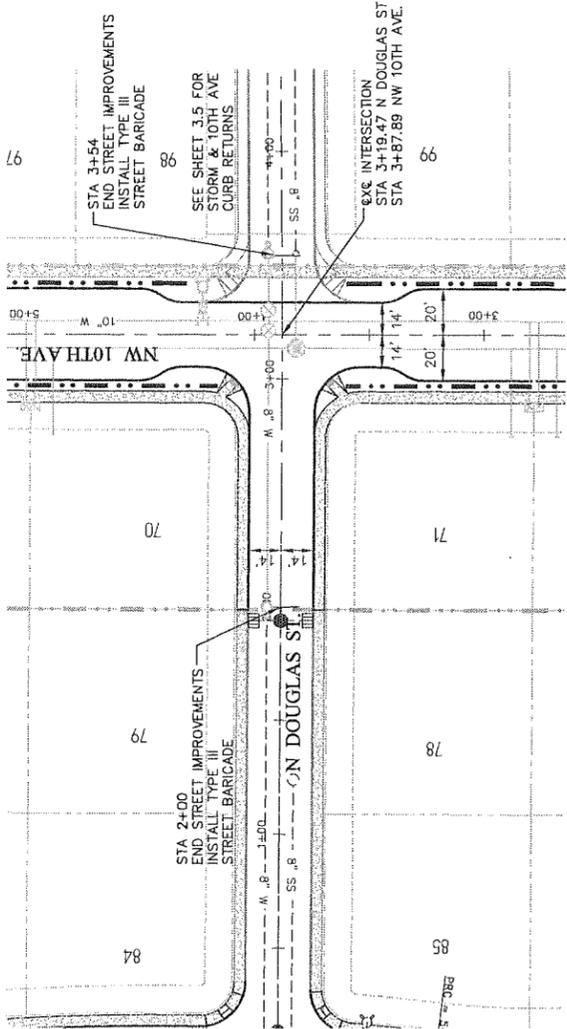
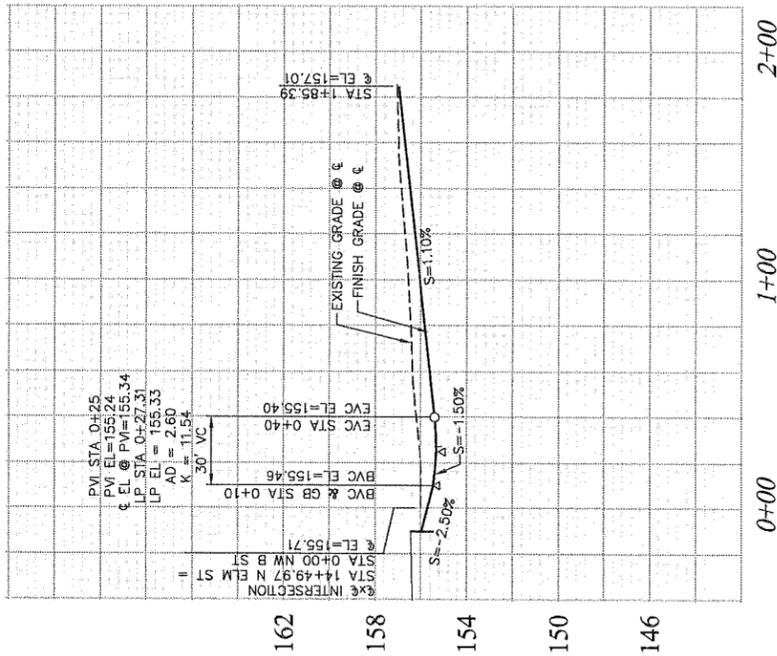
No.	RADIUS	Δ	LENGTH	CL
23	29.00'	247°11'06"	125.11'	48.31'
24	20.00'	67°11'06"	23.45'	22.13'

No.	STATION	OFFSET	T.C. ELEVATION
24	1+58.85 PRC NW 8 ST	26.05 RT	156.61
24	1+45.24 PRC NW 8 ST		156.48
24	1+45.24 PRC NW 8 ST	13.82 LT	156.35



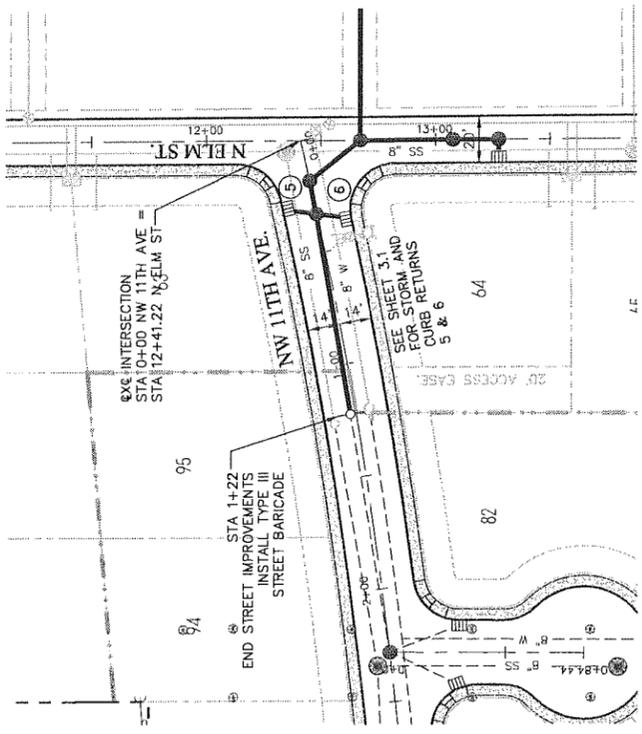
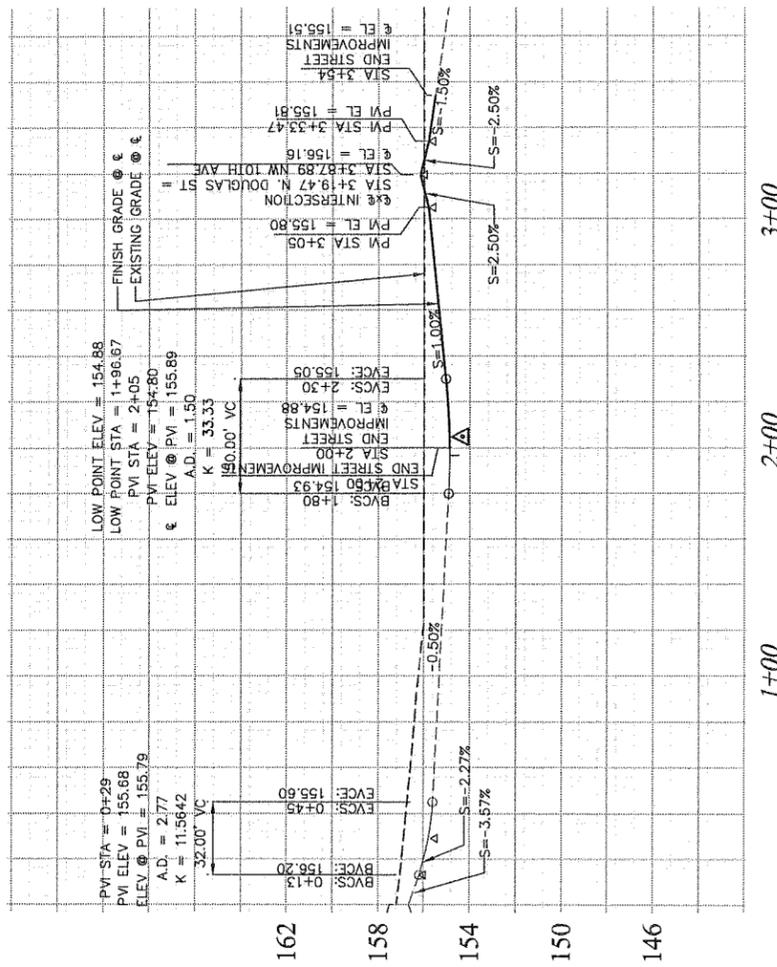
1 NW B STREET - STREET & STORM PLAN
SCALE: 1" = 40'

2 NW B STREET - STREET & STORM PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



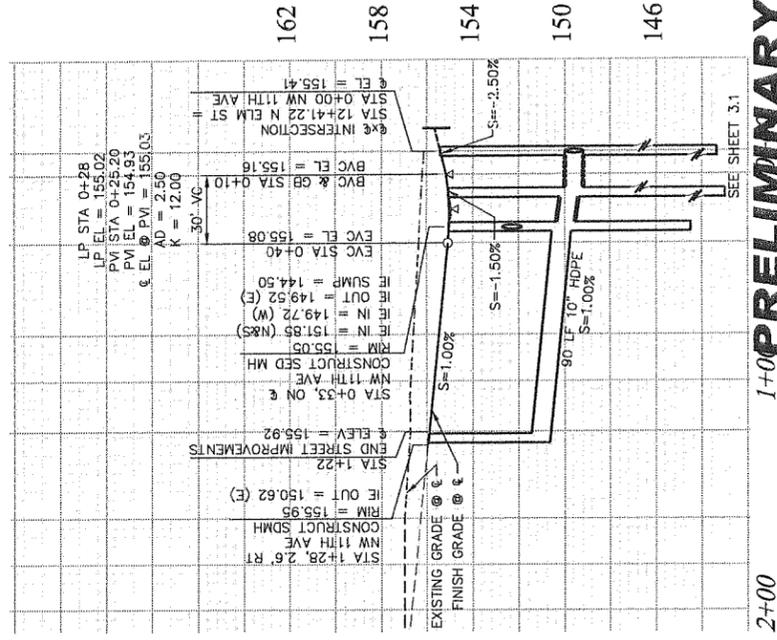
3 N DOUGLAS STREET - STREET & STORM PLAN
SCALE: 1" = 40'

4 N DOUGLAS STREET - STREET & STORM PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



5 NW 11TH AVENUE - STREET & STORM PLAN
SCALE: 1" = 40'

6 NW 11TH AVENUE - STREET & STORM PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



PRELIMINARY

NORTHWOOD ESTATES, PHASE II

NW B, N DOUGLAS STREET & NW 11TH AVE STREET & STORM PLAN & PROFILE

CITY OF CANBY
CLACKAMAS COUNTY, OREGON

DATE: FEB 2010
P/A: 1391
CJM
RCO
JAMES - SHEET 3-4

3.4 OF 8

CURRAN-MCLEOD, INC.
CONSULTING ENGINEERS

6655 SW HAMPTON ST. SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478

REGISTERED PROFESSIONAL ENGINEER
CURTIS JAMES
11.250
OREGON

REVISIONS

REV.	DESCRIPTION	REVISION BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

No.	RADIUS	Δ	LENGTH	CL
21	15.00'	36°52'12"	9.65'	9.49'
22	15.00'	36°52'12"	9.65'	9.49'
23	15.00'	36°52'12"	9.65'	9.49'
24	34+25.91 PC	20.00 RT	156.47	
25	34+34.91 PRC	17.00 RT	156.50	
26	34+43.91 PT	14.00 RT	156.53	

No.	RADIUS	Δ	LENGTH	CL
27	20.00'	89°29'37"	31.24'	28.16'
28	20.00'	89°29'37"	31.24'	28.16'
29	34+53.77 PC	14.00 RT	155.51	
30	34+53.77 PRC	14.00 RT	155.51	
31	34+53.77 PT	14.00 RT	155.51	
32	44+22.20 PC	14.00 RT	156.14	
33	44+31.20 PRC	17.00 RT	155.97	
34	44+40.20 PT	20.00 RT	155.94	

No.	RADIUS	Δ	LENGTH	CL
35	15.00'	36°52'12"	9.65'	9.49'
36	15.00'	36°52'12"	9.65'	9.49'
37	44+31.91 PC	14.00 LT	156.00	
38	44+40.91 PRC	17.00 LT	155.97	
39	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
40	20.00'	89°29'37"	31.24'	28.16'
41	20.00'	89°29'37"	31.24'	28.16'
42	0+39.96 PC	14.00 LT	156.55	
43	0+48.96 PRC	14.00 LT	156.55	
44	0+57.96 PT	14.00 LT	156.55	
45	1+43.88 PC	20.00 RT	157.38	
46	1+43.88 PRC	20.00 RT	157.38	
47	1+43.88 PT	20.00 RT	157.38	

No.	RADIUS	Δ	LENGTH	CL
48	15.00'	36°52'12"	9.65'	9.49'
49	15.00'	36°52'12"	9.65'	9.49'
50	44+31.91 PC	14.00 LT	156.00	
51	44+40.91 PRC	17.00 LT	155.97	
52	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
53	15.00'	36°52'12"	9.65'	9.49'
54	15.00'	36°52'12"	9.65'	9.49'
55	44+31.91 PC	14.00 LT	156.00	
56	44+40.91 PRC	17.00 LT	155.97	
57	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
58	20.00'	89°29'37"	31.43'	28.29'
59	20.00'	89°29'37"	31.43'	28.29'
60	0+75.88 PC	20.00 RT	157.72	
61	0+84.88 PRC	20.00 RT	157.72	
62	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
63	15.00'	36°52'12"	9.65'	9.49'
64	15.00'	36°52'12"	9.65'	9.49'
65	44+31.91 PC	14.00 LT	156.00	
66	44+40.91 PRC	17.00 LT	155.97	
67	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
68	15.00'	36°52'12"	9.65'	9.49'
69	15.00'	36°52'12"	9.65'	9.49'
70	44+31.91 PC	14.00 LT	156.00	
71	44+40.91 PRC	17.00 LT	155.97	
72	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
73	15.00'	36°52'12"	9.65'	9.49'
74	15.00'	36°52'12"	9.65'	9.49'
75	44+31.91 PC	14.00 LT	156.00	
76	44+40.91 PRC	17.00 LT	155.97	
77	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
78	15.00'	36°52'12"	9.65'	9.49'
79	15.00'	36°52'12"	9.65'	9.49'
80	44+31.91 PC	14.00 LT	156.00	
81	44+40.91 PRC	17.00 LT	155.97	
82	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
83	15.00'	36°52'12"	9.65'	9.49'
84	15.00'	36°52'12"	9.65'	9.49'
85	44+31.91 PC	14.00 LT	156.00	
86	44+40.91 PRC	17.00 LT	155.97	
87	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
88	20.00'	89°29'37"	31.43'	28.29'
89	20.00'	89°29'37"	31.43'	28.29'
90	0+75.88 PC	20.00 RT	157.72	
91	0+84.88 PRC	20.00 RT	157.72	
92	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
93	15.00'	36°52'12"	9.65'	9.49'
94	15.00'	36°52'12"	9.65'	9.49'
95	44+31.91 PC	14.00 LT	156.00	
96	44+40.91 PRC	17.00 LT	155.97	
97	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
98	15.00'	36°52'12"	9.65'	9.49'
99	15.00'	36°52'12"	9.65'	9.49'
100	44+31.91 PC	14.00 LT	156.00	
101	44+40.91 PRC	17.00 LT	155.97	
102	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
103	15.00'	36°52'12"	9.65'	9.49'
104	15.00'	36°52'12"	9.65'	9.49'
105	44+31.91 PC	14.00 LT	156.00	
106	44+40.91 PRC	17.00 LT	155.97	
107	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
108	20.00'	89°29'37"	31.43'	28.29'
109	20.00'	89°29'37"	31.43'	28.29'
110	0+75.88 PC	20.00 RT	157.72	
111	0+84.88 PRC	20.00 RT	157.72	
112	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
113	15.00'	36°52'12"	9.65'	9.49'
114	15.00'	36°52'12"	9.65'	9.49'
115	44+31.91 PC	14.00 LT	156.00	
116	44+40.91 PRC	17.00 LT	155.97	
117	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
118	20.00'	89°29'37"	31.43'	28.29'
119	20.00'	89°29'37"	31.43'	28.29'
120	0+75.88 PC	20.00 RT	157.72	
121	0+84.88 PRC	20.00 RT	157.72	
122	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
123	15.00'	36°52'12"	9.65'	9.49'
124	15.00'	36°52'12"	9.65'	9.49'
125	44+31.91 PC	14.00 LT	156.00	
126	44+40.91 PRC	17.00 LT	155.97	
127	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
128	20.00'	89°29'37"	31.43'	28.29'
129	20.00'	89°29'37"	31.43'	28.29'
130	0+75.88 PC	20.00 RT	157.72	
131	0+84.88 PRC	20.00 RT	157.72	
132	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
133	15.00'	36°52'12"	9.65'	9.49'
134	15.00'	36°52'12"	9.65'	9.49'
135	44+31.91 PC	14.00 LT	156.00	
136	44+40.91 PRC	17.00 LT	155.97	
137	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
138	20.00'	89°29'37"	31.43'	28.29'
139	20.00'	89°29'37"	31.43'	28.29'
140	0+75.88 PC	20.00 RT	157.72	
141	0+84.88 PRC	20.00 RT	157.72	
142	0+93.88 PT	20.00 RT	157.72	

No.	RADIUS	Δ	LENGTH	CL
143	15.00'	36°52'12"	9.65'	9.49'
144	15.00'	36°52'12"	9.65'	9.49'
145	44+31.91 PC	14.00 LT	156.00	
146	44+40.91 PRC	17.00 LT	155.97	
147	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
148	20.00'	89°29'37"	31.43'	28.29'
149	20.00'	89°29'37"	31.43'	28.29'
150	0+75.88 PC	20.00 RT	157.72	
151	0+84.88 PRC	20.00 RT	157.72	
152	0+93.88 PT	20.00 RT	157.72	

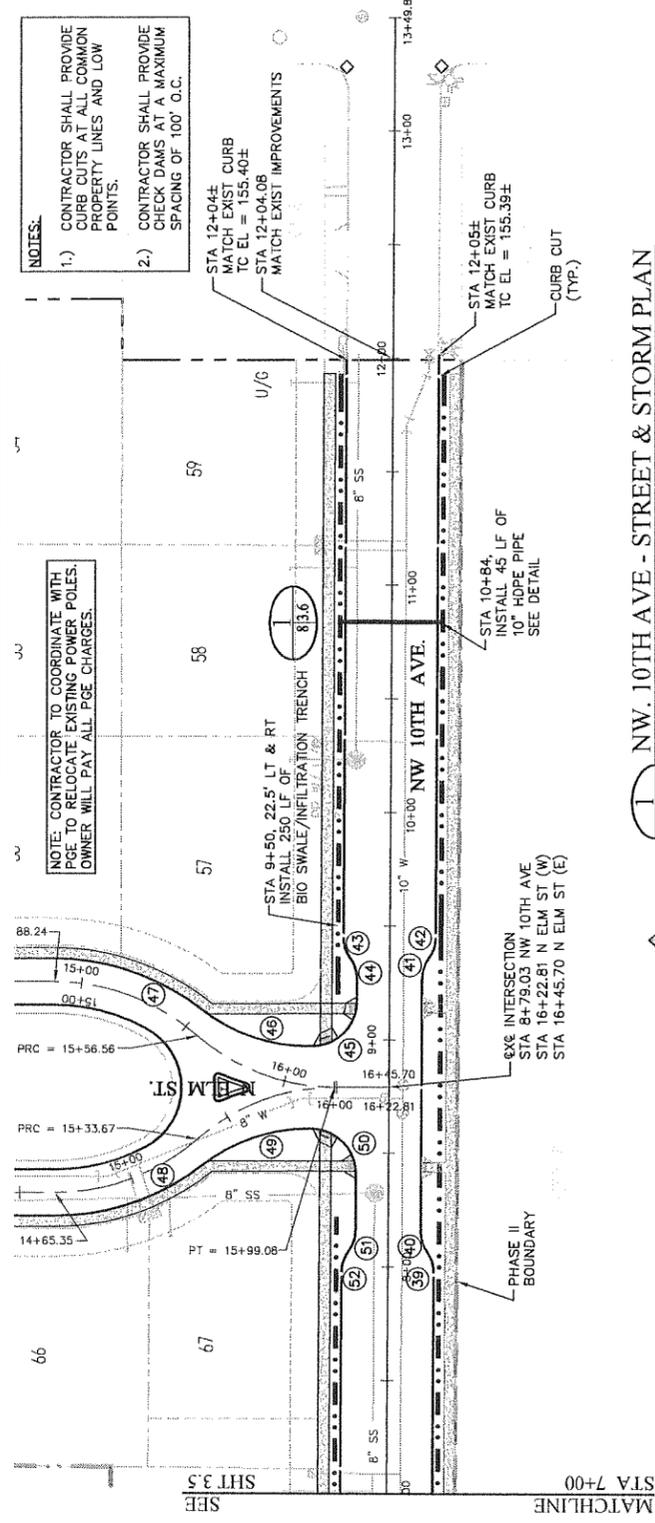
No.	RADIUS	Δ	LENGTH	CL
153	15.00'	36°52'12"	9.65'	9.49'
154	15.00'	36°52'12"	9.65'	9.49'
155	44+31.91 PC	14.00 LT	156.00	
156	44+40.91 PRC	17.00 LT	155.97	
157	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
158	20.00'	89°29'37"	31.43'	28.29'
159	20.00'	89°29'37"	31.43'	28.29'
160	0+75.88 PC	20.00 RT	157.72	
161	0+84.88 PRC	20.00 RT	157.72	
162	0+93.88 PT	20.00 RT	157.72	

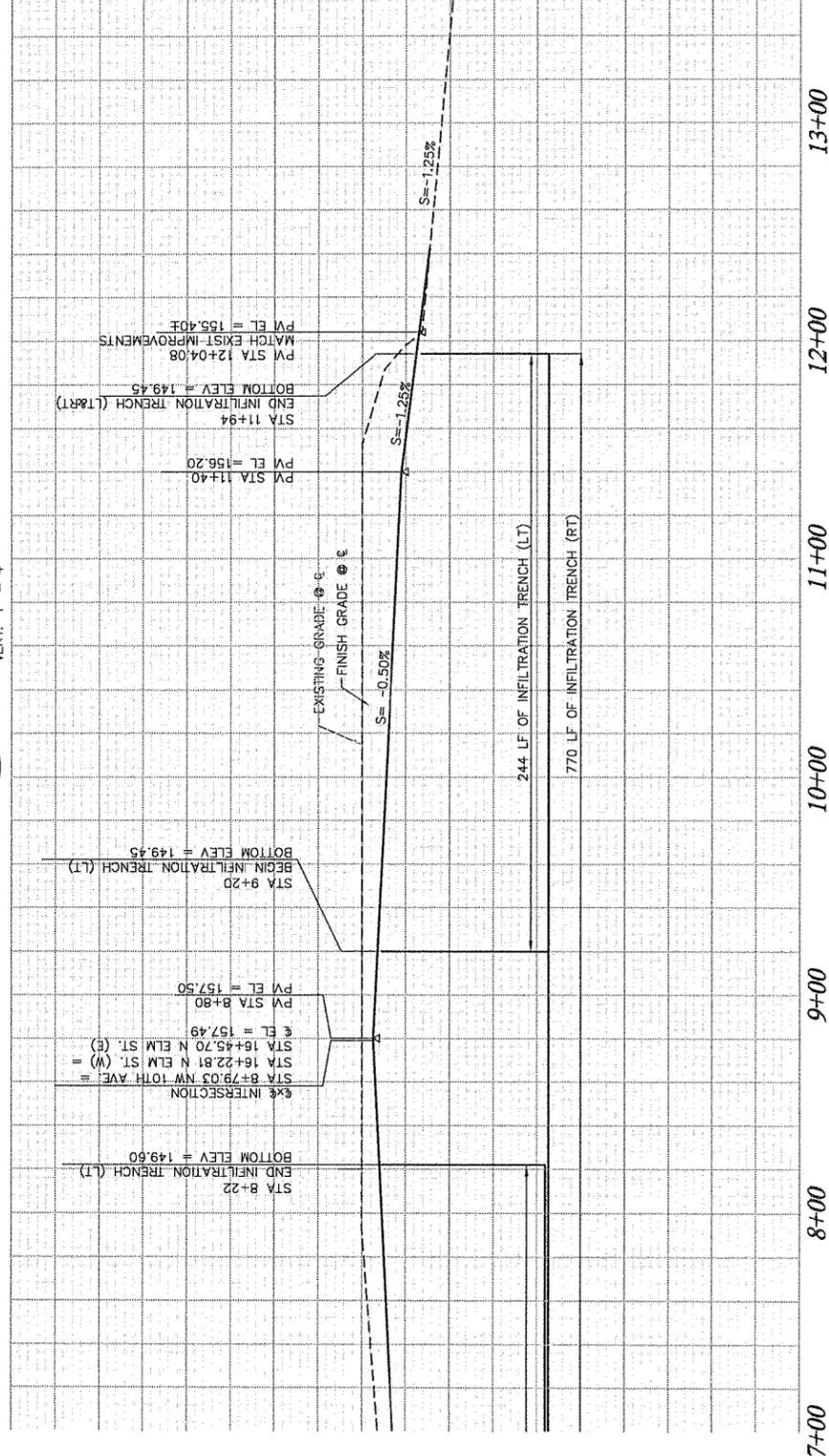
No.	RADIUS	Δ	LENGTH	CL
163	15.00'	36°52'12"	9.65'	9.49'
164	15.00'	36°52'12"	9.65'	9.49'
165	44+31.91 PC	14.00 LT	156.00	
166	44+40.91 PRC	17.00 LT	155.97	
167	44+49.91 PT	20.00 LT	155.94	

No.	RADIUS	Δ	LENGTH	CL
168	20.00'	89°29'37"	31.43'	28.29'
169	20.00'	89°29'37"	31.43'	28.29'
170	0+75.88 PC	20.00 RT	157.72	
171	0+84.88 PRC	20.00 RT	157.72	
172	0+93.88 PT	20.00 RT	157.72	

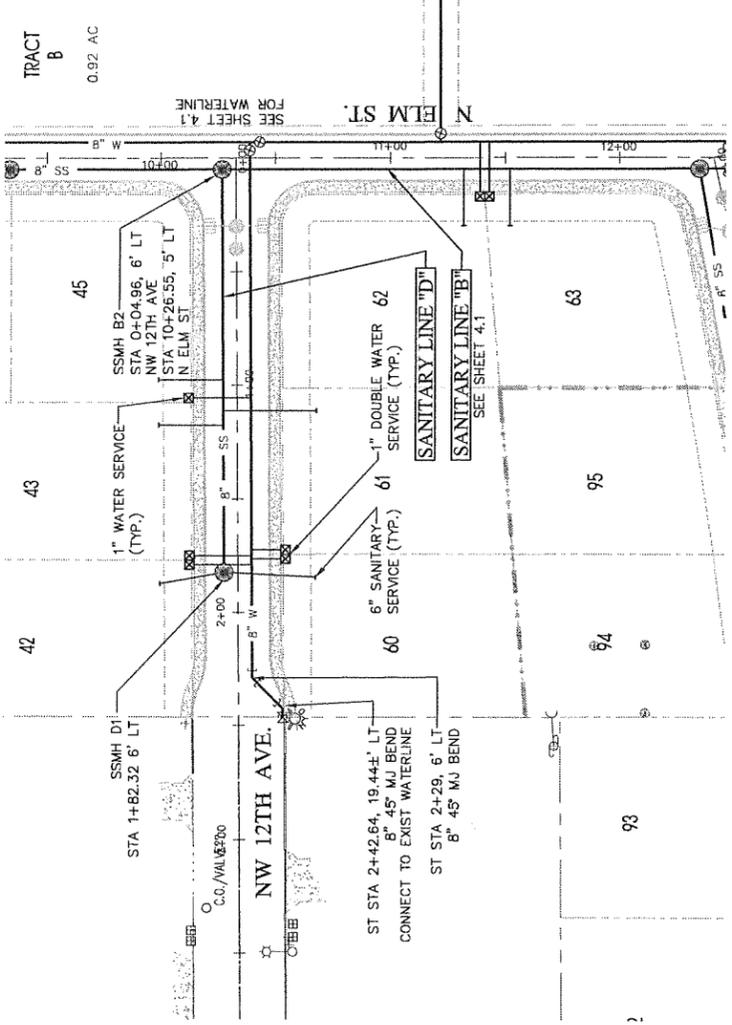
No.	RADIUS	Δ	LENGTH	CL
173	15.00'	36°52'12"	9.65'	9.49'
174	15.00'	36°52'12"	9.65'	9.49'
175	44+31.91 PC	14.00 LT	156.00	
176	44+40.91 PRC	17.00 LT	155.97	
177	44+4			



No.	RADIUS	Δ	LENGTH	CL
39	15.00'	36°52'12"	9.65'	9.48'
40	15.00'	36°52'12"	9.65'	9.48'
41	STATION	OFFSET	T.C. ELEVATION	
42	7+95.82 PC	20.00 RT	157.08	
43	8+06.82 PRC	17.00 RT	157.28	
44	8+15.82 PT	14.00 RT	157.33	
45	STATION	OFFSET	T.C. ELEVATION	
46	9+26.83 PC	14.00 RT	157.42	
47	9+35.83 PRC	17.00 RT	157.30	
48	9+44.83 PT	20.00 RT	157.18	
49	STATION	OFFSET	T.C. ELEVATION	
50	10+00			
51	10+10			
52	10+20			
53	10+30			
54	10+40			
55	10+50			
56	10+60			
57	10+70			
58	10+80			
59	10+90			
60	11+00			
61	11+10			
62	11+20			
63	11+30			
64	11+40			
65	11+50			
66	12+00			
67	12+10			
68	12+20			
69	12+30			
70	12+40			
71	12+50			
72	13+00			



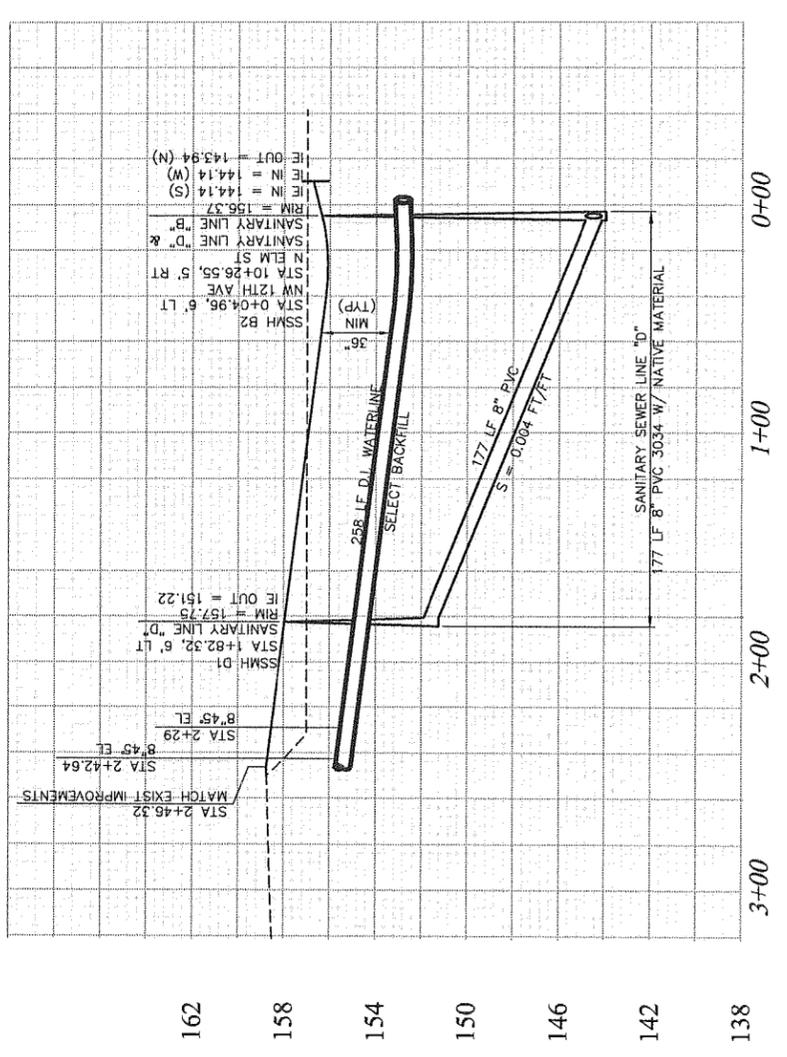
No.	RADIUS	Δ	LENGTH	CL
69	75.00'	38°54'	50.12'	48.19'
70	STATION	OFFSET	T.C. ELEVATION	
71	16+07.84 PT	17.11 LT	157.02	
72	16+16.84 PRC	17.11 LT	157.02	
73	16+25.84 PRC	17.11 LT	157.02	
74	16+34.84 PT	17.11 LT	157.02	
75	STATION	OFFSET	T.C. ELEVATION	
76	17+00			
77	17+10			
78	17+20			
79	17+30			
80	17+40			
81	17+50			
82	18+00			
83	18+10			
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357	63+50			
358	64+00			



1 NW 12TH AVENUE (WEST) - LINE D SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'



2 NW 12TH AVENUE (WEST) - LINE D SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'

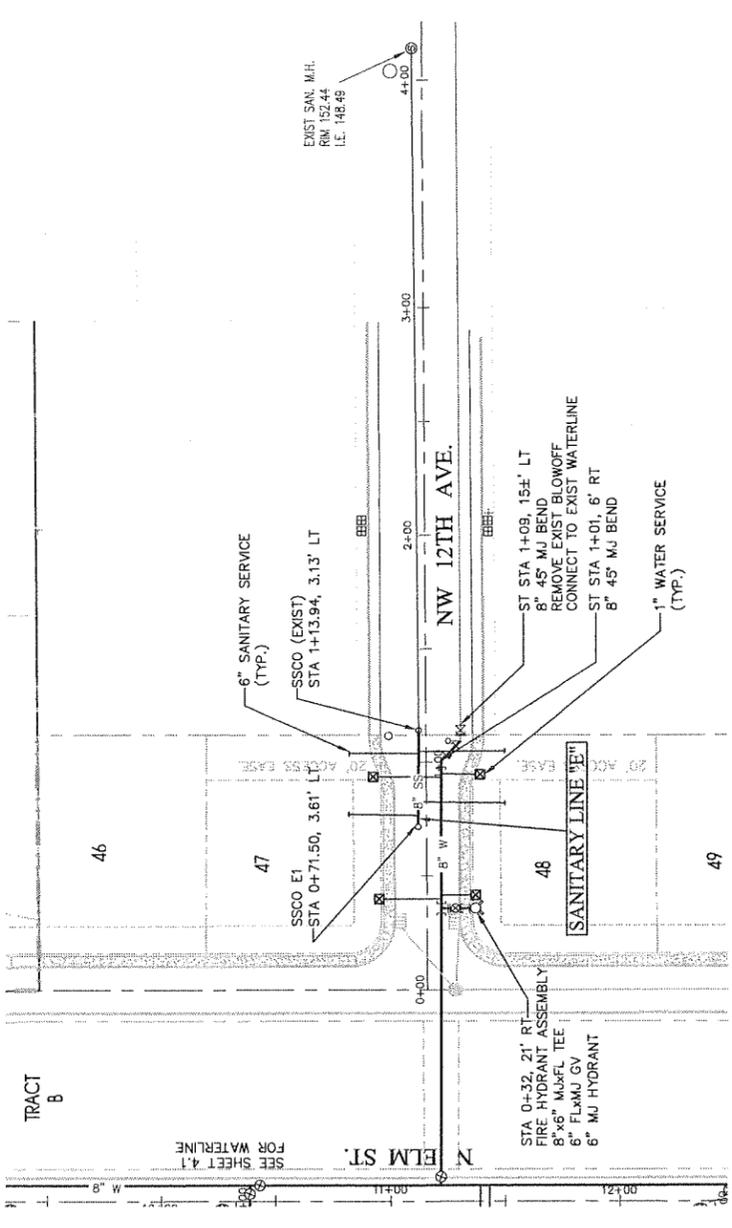


SANITARY LATERALS LINE "D"			
LOT#	STA	LENGTH	D @ PL
42	1+82	34'	6"
43	1+18	34'	6"
45	0+98	73'	6"
60	1+82	67'	6"
61	1+11	45'	6"

ALL SANITARY LATERALS SHALL BE 6" PVC AND HAVE A MIN SLOPE OF 2.00%

SANITARY LATERALS LINE "E"			
LOT#	STA	LENGTH	D @ PL
46	1+04	95'	5.5"
47	0+78	31'	5.5"
48	0+83	37'	5.5"
49	1+05	105'	5.5"

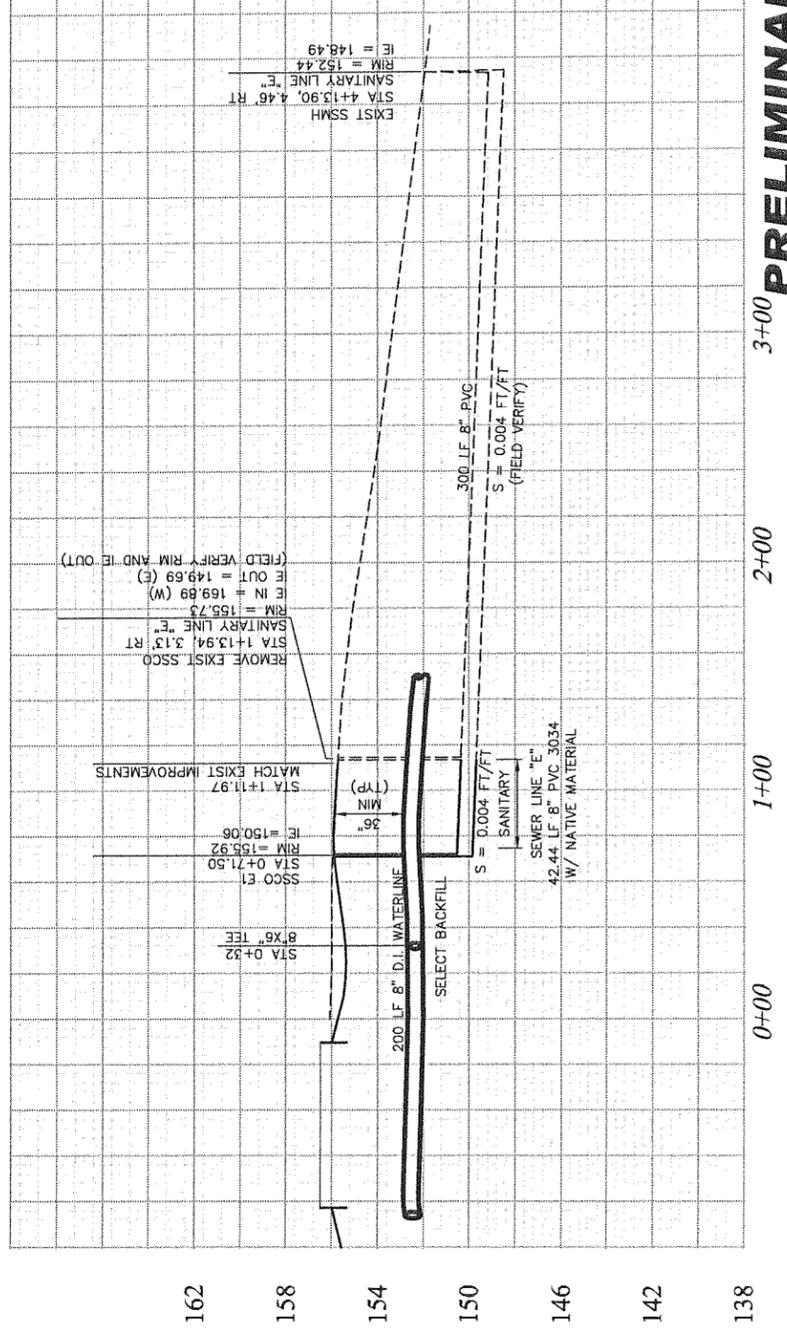
ALL SANITARY LATERALS SHALL BE 6" PVC AND HAVE A MIN SLOPE OF 2.00%



3 NW 12TH AVENUE (EAST) - LINE E SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'



4 NW 12TH AVENUE (EAST) - LINE E SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



PRELIMINARY

NORTHWOOD ESTATES, PHASE II
NW 12TH AVENUE
SANITARY SEWER & WATER PLAN & PROFILE

CITY OF CANBY
CLACKAMAS COUNTY, OREGON

CURRAN-MCLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST, SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478

DATE: FEB 2010
DWG: 1391
CJM
RCD
SAB91-SHEET 4-3

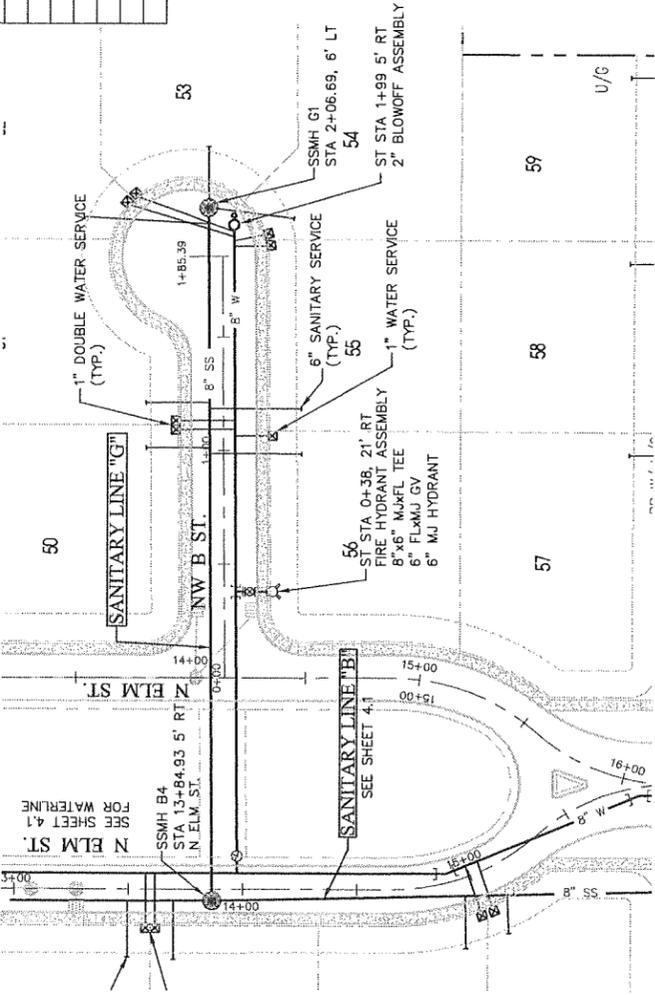
4.3 OF 8

REV.	DESCRIPTION	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

SANITARY LATERALS LINE "G"			
LOT#	LINE STA	LENGTH	D @ PL
50	1+01	27'	6"
51	1+21	27'	6"
52	2+00	60'	6"
53	2+07	59'	6"
54	2+07	46'	6"
55	1+83	40'	6"
56	0+99	40'	6"

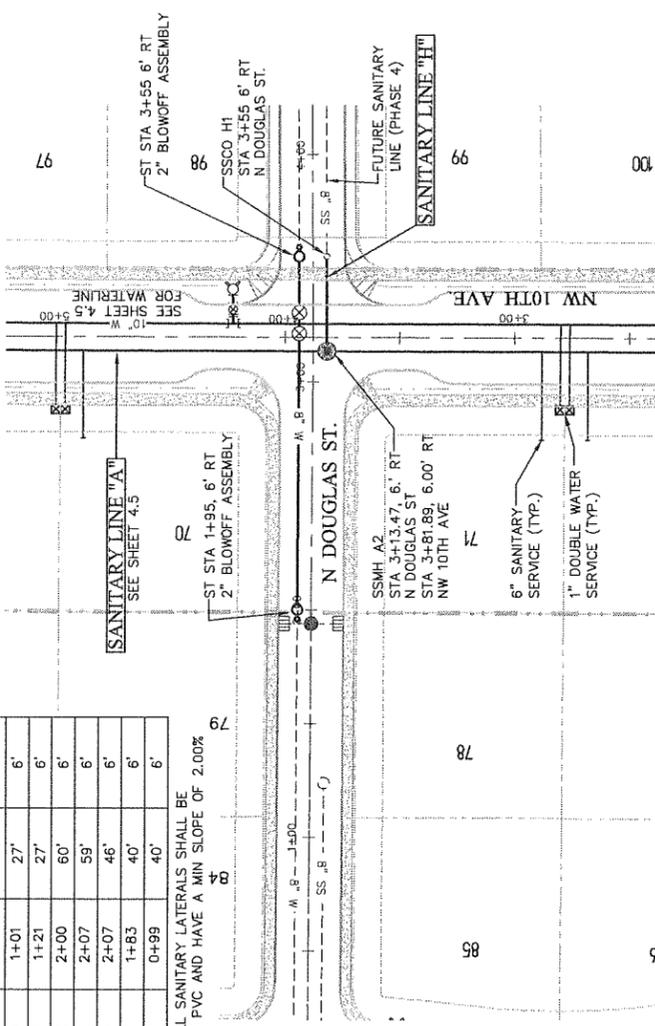
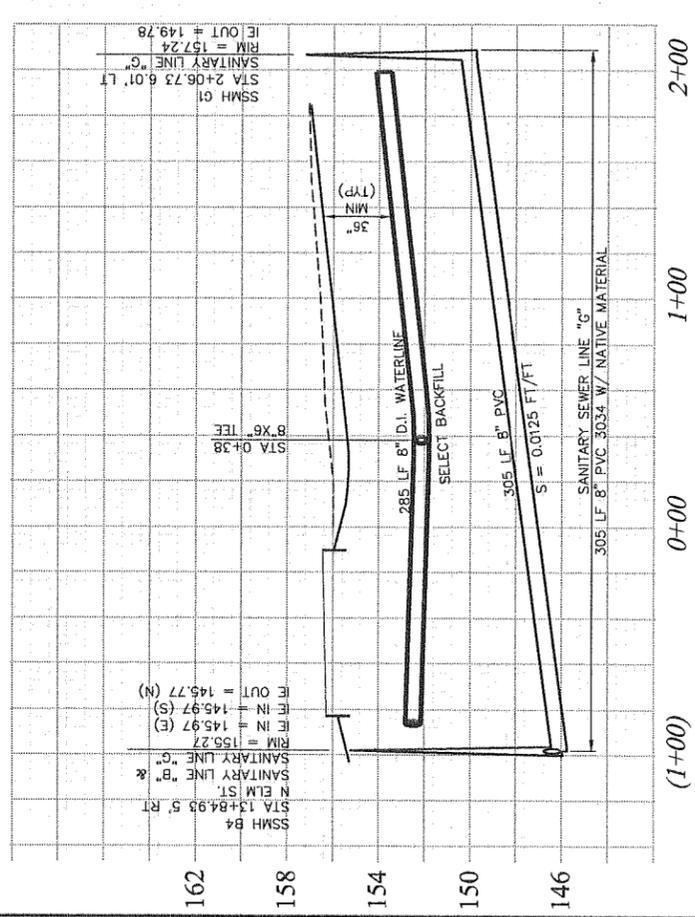
ALL SANITARY LATERALS SHALL BE 6" PVC AND HAVE A MIN SLOPE OF 2.00%



1 NW B STREET - LINE G SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'



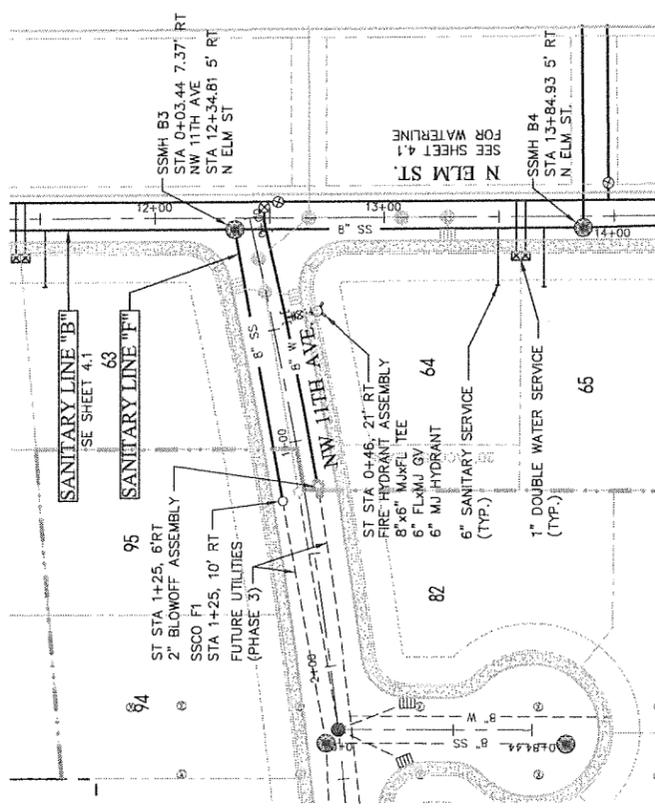
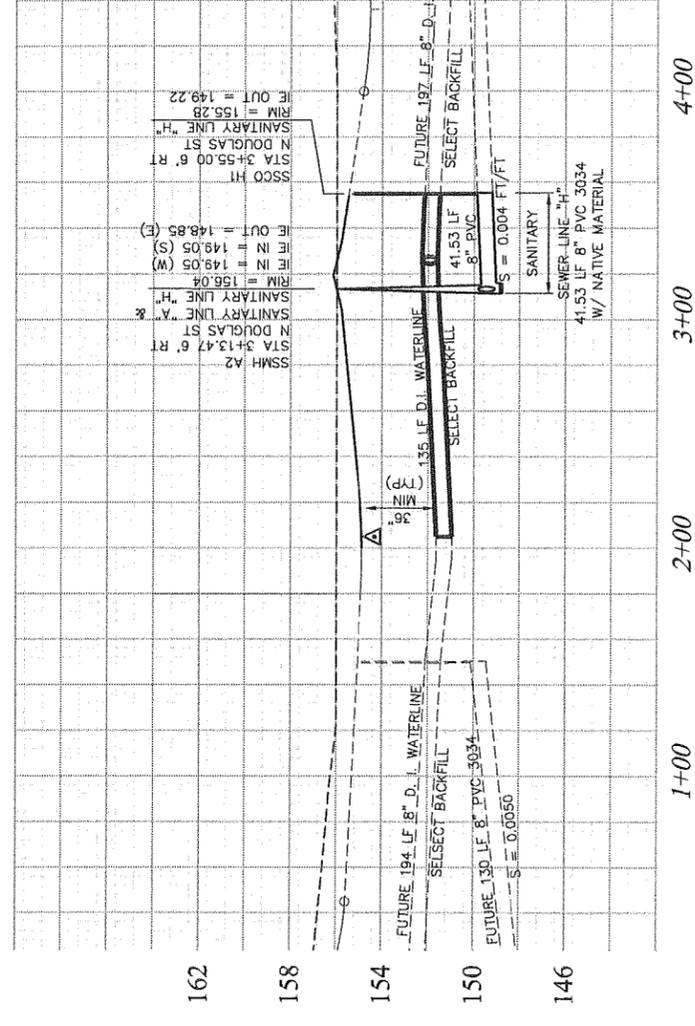
2 NW B STREET - LINE G SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



3 N DOUGLAS STREET - LINE H SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'



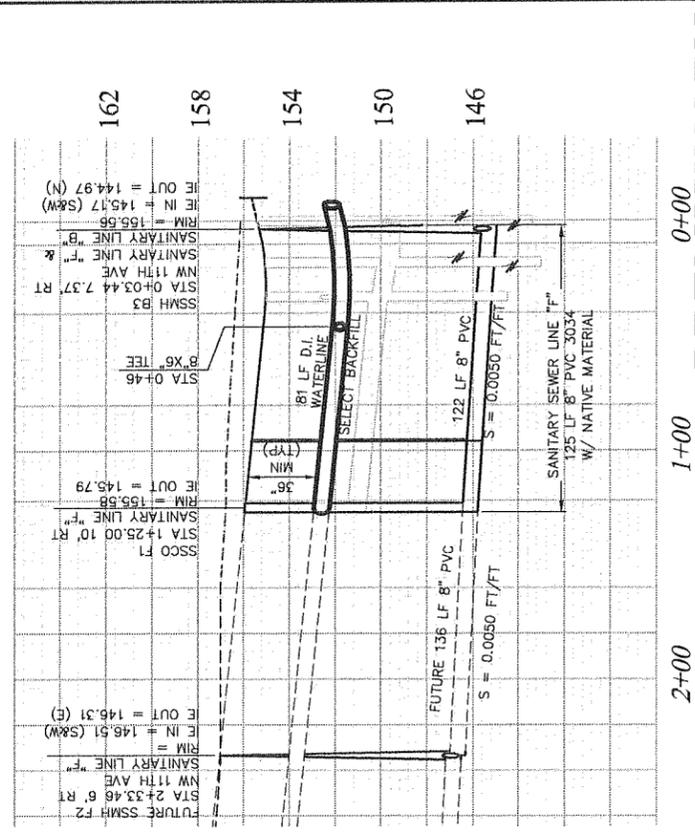
4 N DOUGLAS STREET - LINE H SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



5 NW 11TH AVENUE - LINE F SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'



6 NW 11TH AVENUE - LINE F SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

REV	DESCRIPTION	DATE



CURRAN-MCLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST. SUITE 210
PORTLAND, OREGON 97223
PHONE 659-684-3476

NORTHWOOD ESTATES, PHASE II
NW B, N DOUGLAS STREET & NW 11TH AVE
SANITARY SEWER & WATER PLAN & PROFILE

CITY OF CANBY
CLACKAMAS COUNTY, OREGON

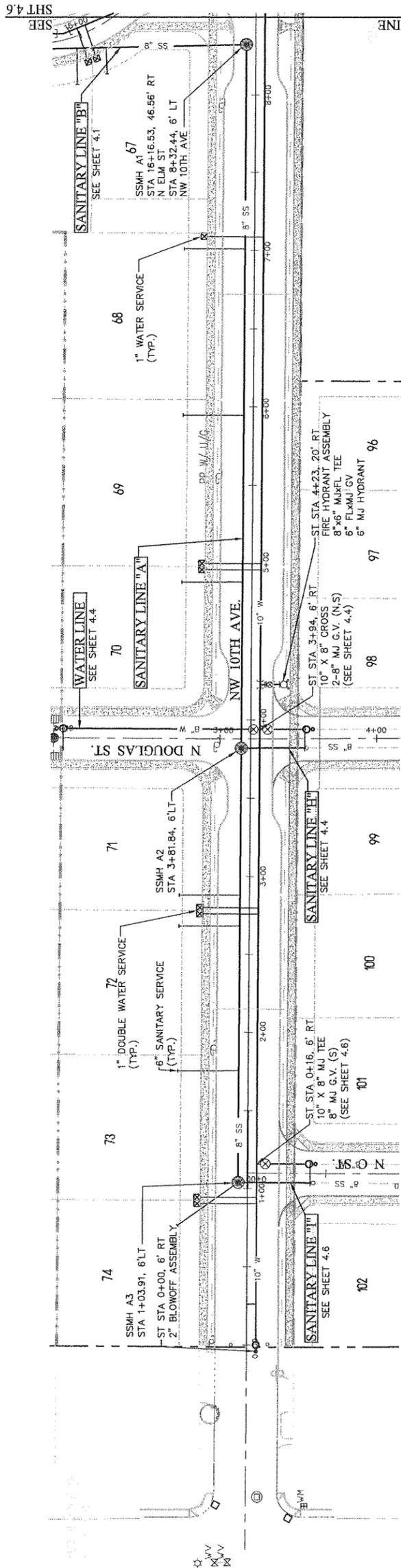
PRELIMINARY

DATE: FEB 2010
JOB NO: 1391
JOB: CUM
RCD: RCO
SHEET: 1391-SHEET4-4

4.4 OF 8

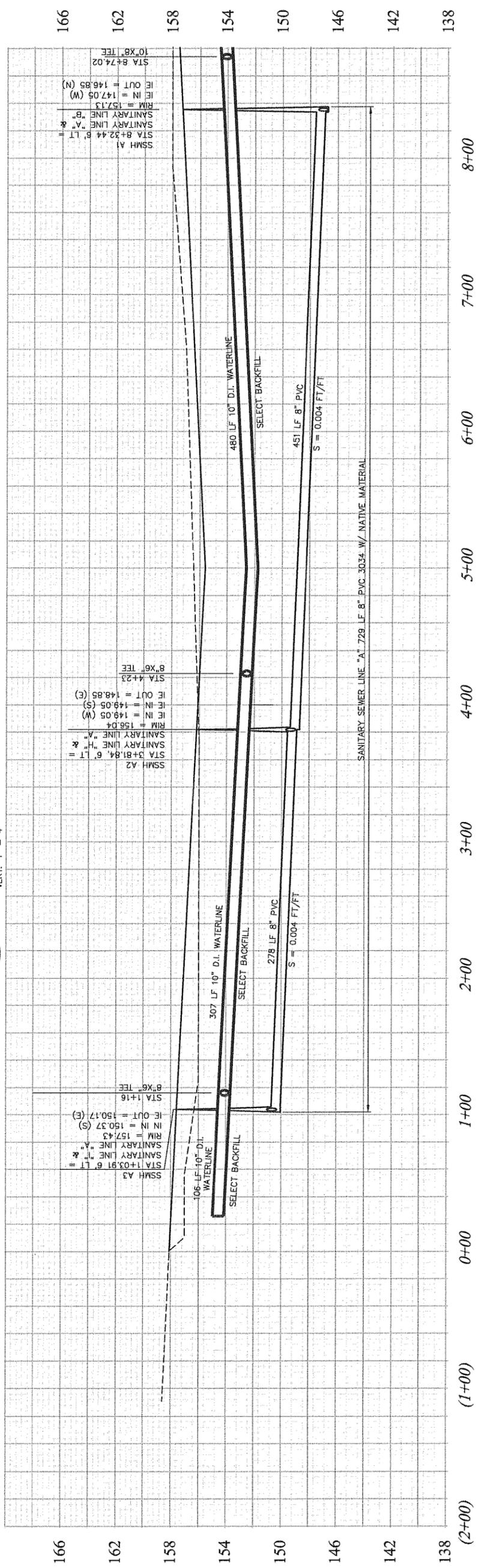
SANITARY LATERALS LINE "A"			
LOT#	LINE STA	LENGTH	D @ PL
68	7+01	38'	6'
69	5+95	38'	6'
70	4+88	38'	6'
71	2+88	38'	6'
72	2+68	38'	6'
73	1+75	38'	6'
74	1+04	45'	6'

ALL SANITARY LATERALS SHALL BE 6" PVC AND HAVE A MIN SLOPE OF 2.00%



1 NW 10TH AVE - LINE A SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'

2 NW 10TH AVE - LINE A SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40', VERT. 1" = 4'



PRELIMINARY

NORTHWOOD ESTATES, PHASE II
NW 10TH AVENUE
SANITARY SEWER & WATER PLAN & PROFILE
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

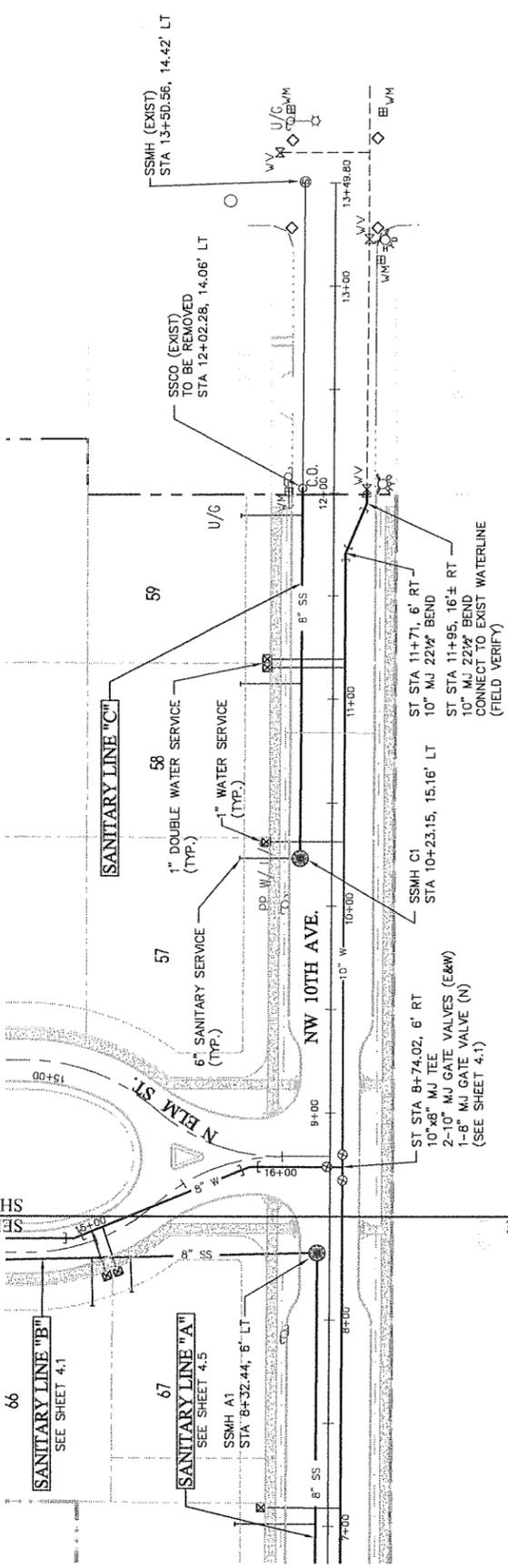
CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST, SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 884-3478

NO.	DESCRIPTION	REVISION BY	DATE

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REVISIONS

DATE FEB 2010
DRAWN BY
CHECKED BY
DATE

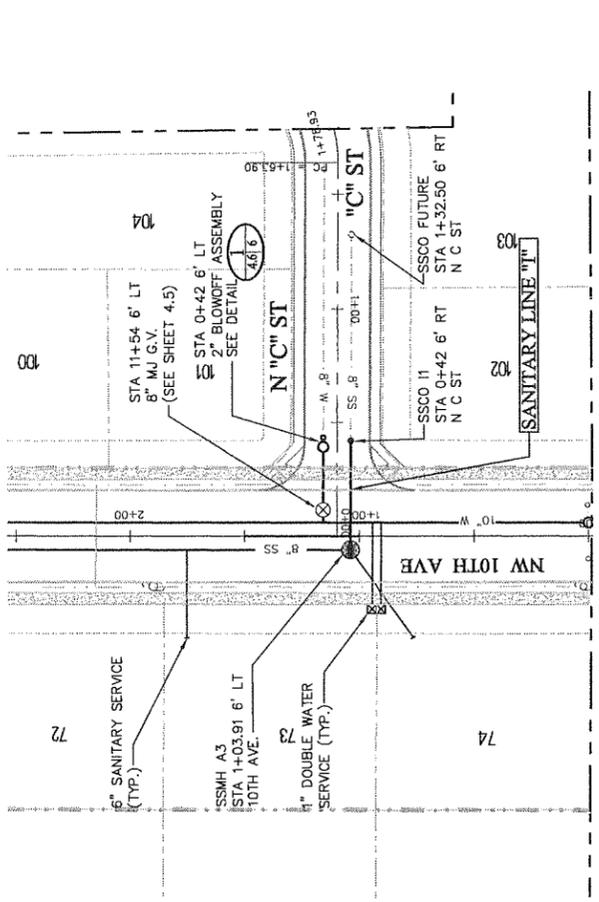
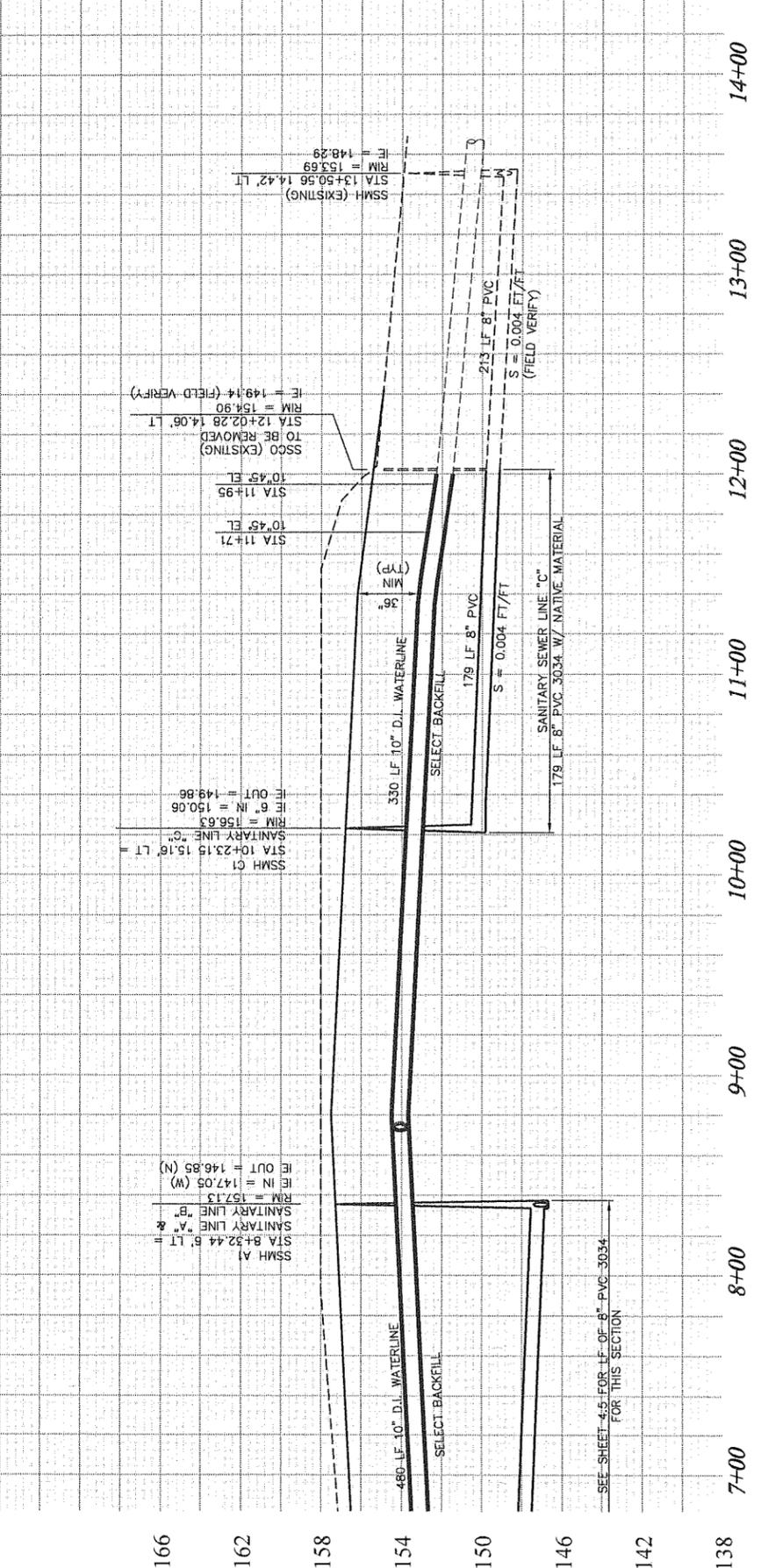


1 NW 10TH AVE - LINE A & C SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'

SANITARY LATERALS LINE "C"			
LOT#	LINE STA	LENGTH	D @ PL
57	10+34	33'	6"
58	11+08	29'	6"
59	11+89	29'	6"

ALL SANITARY LATERALS SHALL BE 6" PVC AND HAVE A MIN SLOPE OF 2.00%

2 NW 10TH AVE - LINE A & C SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40' VERT. 1" = 4'



3 NC ST - LINE I SANITARY SEWER & WATER PLAN
SCALE: 1" = 40'

4 NC ST - LINE I SANITARY SEWER & WATER PROFILE
SCALE: HORIZ. 1" = 40' VERT. 1" = 4'

DATE	FEB 2010
NO.	1391
BY	CJM
CHKD	RCO
DATE	1391-SHEET-4-5

NORTHWOOD ESTATES, PHASE II
NW 10TH AVENUE
SANITARY SEWER & WATER PLAN & PROFILE
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

CURRAN-MCLEOD, INC
CONSULTING ENGINEERS
6655 SW HAMPTON ST, SUITE 200
PORTLAND, OREGON 97223
PHONE (503) 684-3476



NO.	REVISION	DATE

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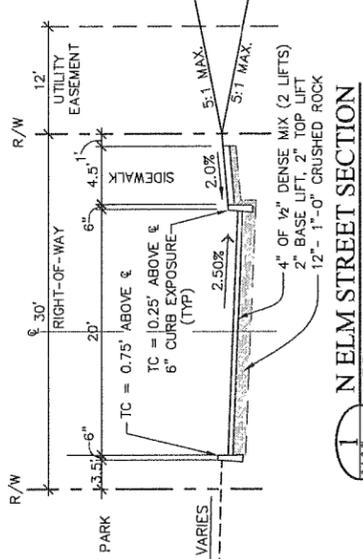
PRELIMINARY
138 142 146 150 154 158 162 166

J:\Canby\1391-Nwood\PHASE II\dwg\1391-SHEET-4-5.dwg, SHEET 4.5, 2/23/2010 4:32:11 PM

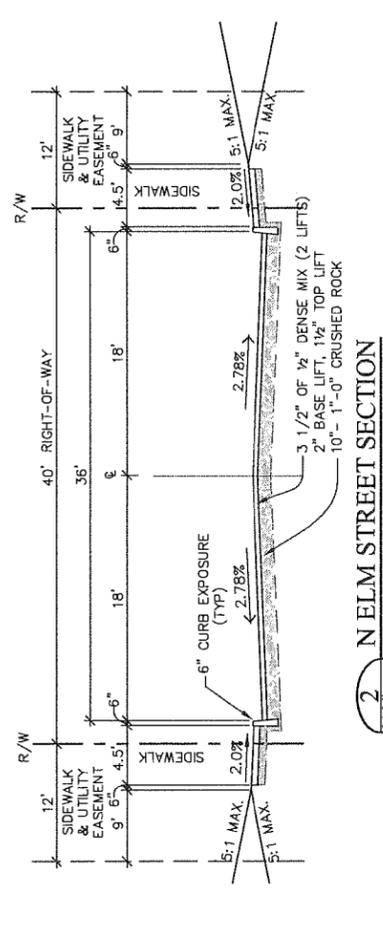
WATERLINE REQUIRED LENGTH (FEET) OF MECHANICAL RESTRAINT ON EACH SIDE OF THE FITTING

Pipe Size	Sand/Silt		Valve/Tee Plug
	11-1/4"	22-1/2"	
6	4	8	59
8	5	10	49
10	6	12	59
12	7	14	88

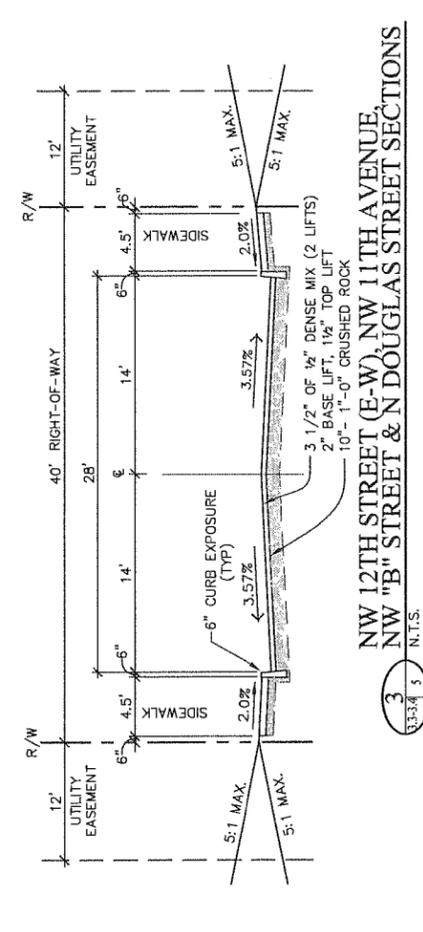
TEST PRESSURE 150 PSI, MIN 36" COVER



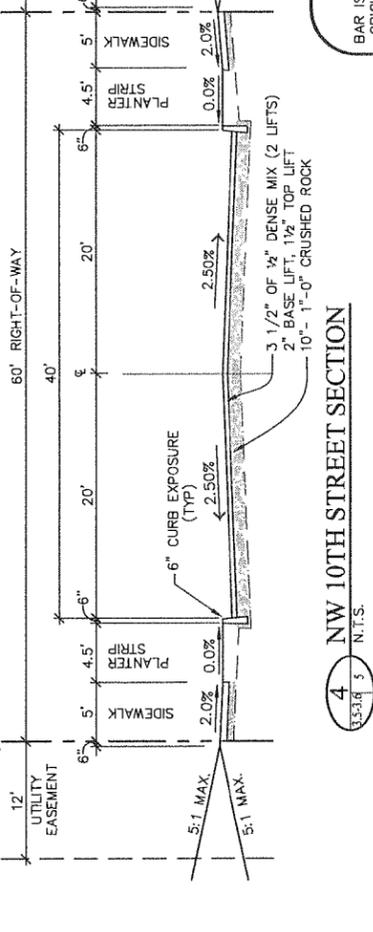
1 N ELM STREET SECTION
WEST SIDE AND EAST SIDE (MIRRORED) OF PARK



2 N ELM STREET SECTION
FROM EAST AND WEST MATCH POINT STA TO THE INTERSECTION OF N 10TH AVE.



3 NW 12TH STREET (E-W), NW 11TH AVENUE, NW "B" STREET & N DOUGLAS STREET SECTIONS



4 NW 10TH STREET SECTION

GENERAL NOTES

- ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH CITY OF CANBY AND CLACKAMAS COUNTY SPECIFICATIONS, THE ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STATE OF OREGON PLUMBING CODE, THE OREGON DEPARTMENT OF HUMAN RESOURCES, OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY AND AS APPROVED AND NOTED ON THESE DRAWINGS.
- CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS AND LICENSES BEFORE STARTING CONSTRUCTION. A STREET OPENING PERMIT FROM THE CITY OF CANBY, PUBLIC WORKS DEPARTMENT AND FROM CLACKAMAS COUNTY IS REQUIRED PRIOR TO CONSTRUCTION IN A PUBLIC RIGHT-OF-WAY.
- CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL ARRANGE FOR THE RELOCATIONS OF ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION.
- EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND MUST BE VERIFIED BY THE CONTRACTOR. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST.
- ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND THE ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER AS SOON AS THEY BECOME APPARENT. THESE CHANGES SHALL BE INCORPORATED INTO AS-BUILT DRAWINGS SUBMITTED TO THE CITY OF CANBY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ALL DAMAGE OR DESTRUCTION OF PROPERTY, MONUMENTATION OR CONSTRUCTION STAKES. CONTRACTOR SHALL SUPPLY AND SET MONUMENT BOXES FOR CENTERLINE MONUMENTS REQUIRED BY CLACKAMAS COUNTY AND THE CITY OF CANBY.
- THE ENGINEER HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND CONSTRUCTION REVIEW SERVICES RELATING TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED FOR CONTRACTOR TO PERFORM HIS WORK.
- ALL CONSTRUCTION ACCESS TO THE SITE SHALL BE LIMITED TO NW TERRITORIAL ROAD ONLY.

SANITARY GRAVITY SEWER NOTES

- ALL WORK AND MATERIALS TO CONFORM WITH THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE CITY OF CANBY AND THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS.
- MATERIALS
 - POLYVINYL CHLORIDE PIPE (PVC) SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034, SDR 35.
 - MANHOLES SHALL BE PRECAST SECTIONS WITH MINIMUM INSIDE DIAMETER OF 48-INCHES, CONFORMING TO THE REQUIREMENTS OF ASTM C-478, EXCEPT AS NOTED ON THE PLANS.
 - POLYVINYL CHLORIDE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PVC SEWER PIPE SHALL BE CONNECTED TO CONCRETE MANHOLES BY MEANS OF AN APPROVED COUPLING WITH AN ELASTOMERIC GASKET. AN APPROVED WATERSTOP OR FLEXIBLE SLEEVE, USE OF PORTLAND CEMENT GROUT FOR CONNECTING PVC SEWER PIPE TO MANHOLES WILL NOT BE PERMITTED.
 - ALL SANITARY SEWER PIPE LINES SHALL BE TESTED WITH LOW PRESSURE AIR, 85% MANDEL IN ACCORDANCE WITH ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 00445-70, THROUGH 00445-75. ALL MANHOLES SHALL BE HYDROSTATIC OR VACUUM TESTED PER ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 00470-20 AND 00470-21.
 - FOLLOWING ACCEPTABLE TESTING, THE CONTRACTOR SHALL FLUSH THE LINES AND PROVIDE ACCESS FOR THE CITY TO COMPLETE PIPELINE INSPECTION. INSPECTION SHALL BE AT THE CONTRACTOR'S EXPENSE FOR THE FIRST INSPECTION. ANY REQUIRED FOLLOW-UP TESTING SHALL BE PAID BY THE CONTRACTOR. ALL TESTING SHOULD BE WITNESSED BY THE CITY STAFF. TEST RESULTS SHOULD ALSO BE SUBMITTED TO THE CITY.
 - GRANULAR PIPE BEDDING AND FRENCH BACHS SHALL CONFORM TO APWA CLASS B PAVED AREAS. TRENCHES SHALL BE BACK FILLED WITH GRANULAR MATERIALS OR BACKFILL SHALL BE COMPACTED TO 95% RELATIVE DENSITY PER ASTM D-1557. THE METHOD TO ACHIEVE THE REQUIRED COMPACTION, SUBSEQUENT SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE AS A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. THE FREQUENCY OF TESTING WILL BE ADEQUATE TO ASSURE THE ENGINEER AND THE CITY OF COMPLIANCE.
 - BACKFILL IN ALL NON-TRAFFIC AREAS SHALL BE CLEAN SAND, OR ACCEPTABLE NATIVE MATERIAL CAPABLE OF BEING COMPACTED, WITH 100% OF THE MATERIAL ABLE TO PASS THROUGH A 2" SCREEN, BACKFILL IN NON-TRAFFIC AREAS SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 (ASTM D-1557).
 - THE SERVICE LATERALS SHALL BE 6-INCH MINIMUM TO PROPERTY LINE AND INSTALLED WITH A MINIMUM GRADE OF 2% UNLESS OTHERWISE SHOWN ON THE PLANS.
 - SERVICE LATERALS SHALL BE INSTALLED TO A POINT BEYOND THE LINE OF THE SEWER OR UTILITY EASEMENT AS SHOWN ON THE PLAN. THE SERVICE LATERAL SHALL BE INSTALLED WITH DETECTABLE WIRE OF 18 AWG. THE WIRE WILL BE SECURED AT THE MAIN AND RUN TO THE END OF SERVICE LATERAL.
 - TEMPORARY "X" MARKERS SHALL BE PLACED AT THE END OF EACH BUILDING SERVICE WITH THE DEPTH FROM TOP OF 2"x4" TO SERVICE INVERT INDICATED.
 - IN EASEMENT AREAS ALL MANHOLES SHALL HAVE TAMPERPROOF LIDS. THE FRAME AND COVER SHALL BE 6" ABOVE FINISH GRADE.

STREETS

- NEW STREET SECTIONS ARE TO BE CLEARED OF ALL SURFACE VEGETATION, AND OTHER MISCELLANEOUS STRUCTURES OR MATERIALS. GRUB IMPROVEMENT AREAS TO REMOVE ALL VEGETATIVE MATTER AND DEBRIS TO A DEPTH OF 6" BELOW SUBGRADE. CONTRACTOR TO PROPERLY DISPOSE OF ALL WASTE MATERIAL BY SPREADING NOT OVER 6" THICK ON LOTS OR TO REMOVE FROM SITE.
- IMMEDIATELY FOLLOWING FINE GRADING OPERATIONS, PROTECTIVE ROLL SUBGRADE AREAS TO BE WITNESSED BY THE CITY, AND ASHLE 95% OF MAXIMUM DENSITY FOR A 6" DEPTH PER AASHTO T-180 TEST METHOD. EMBANKMENTS OR FILLS ARE TO BE CONSTRUCTED IN 6" MAXIMUM LIFTS, WITH EACH LIFT BEING COMPACTED TO 95% MAXIMUM DRY DENSITY PRIOR TO PROCEEDING WITH THE NEXT LIFT. NUMBER AND LOCATION OF COMPACTION TEST WILL BE DESIGNATED BY CITY. AREAS OF STRUCTURAL FILL ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO PLACEMENT OF THE FILL.
- BASE ROCK AGGREGATE SHALL BE 1" - 0" CRUSHED ROCK AS PER OREGON STATE HIGHWAY DIVISION SPECIFICATIONS. BASE ROCK SHALL BE COMPACTED IN 12" MAXIMUM LIFTS TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD.
- THE FIRST LIFT OF ASPHALT CONCRETE IS TO BE 1/2" DENSE MIX AS PER OREGON STATE HIGHWAY DIVISION SPECIFICATIONS. CONTRACTOR IS TO PROVIDE THE CITY INSPECTOR WITH A CERTIFICATE OF COMPLIANCE FROM THE SPECIAL PAYMENT PLAN. THE SECOND LIFT SHALL BE 1/2" DENSE MIX ASPHALT CONCRETE AS PER OSHPD SPECIFICATIONS EXCEPTING TERRITORIAL ROAD. THE SECOND A.C. LIFT WILL NOT BE PLACED UNTIL ONE YEAR AFTER COMPLETION OF THE FIRST LIFT WITH APPROVAL BY THE CITY OF CANBY. TERRITORIAL ROAD SHALL HAVE BOTH AC LIFTS PLACED AT THE TIME OF PAVING. AC RICE DENSITY REQUIREMENTS 91% FOR 1ST LIFT AND 92% FOR 2ND LIFT.
- CONSTRUCTION TYPE "C" CURB USING CLASS "A" 3000 PSI CONCRETE WITH MAXIMUM 1-1/2" AGGREGATE SIZE. CONTRACTION JOINTS AT 15' MAXIMUM ON CENTERS.
- CURB DEPRESSIONS FOR HANDICAP RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND ELSEWHERE AS NOTED ON THE PLANS. SEE CITY OF CANBY STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 00470-20 AND 00470-21 FOR MORE INFORMATION WITH CURRENT A.D.A. REQUIREMENTS. CONCRETE MIX SHALL COMPLY WITH ODOT STANDARDS FOR COMMERCIAL GRADE CONCRETE.
- INSPECTION OF SUBGRADE, BASE ROCK, AND A.C. WILL BE MADE BY ENGINEER'S INSPECTOR.
- ALL MATERIALS, INSTALLATIONS, TESTS, AND INSPECTIONS ARE TO BE IN STRICT ACCORDANCE WITH CITY OF CANBY STANDARDS AND CODES. SETTLEMENT OR CRACKING OF FINISH SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A FAILURE OF THE SUBGRADE AND REPAIRED.
- ALL PIPING IN STREET TO BE GASKET SEALED.
- TEMPORARY ASPHALT BERMS SHALL BE CONSTRUCTED WHICH WILL DIVERT THE SURFACE WATER FROM THE STREETS TO THE CATCH BASINS UNTIL THE FINAL LIFT OF ASPHALT IS PLACED ON THE STREETS.

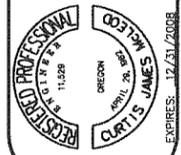
STORM DRAINS

- ALL WORK AND MATERIALS TO CONFORM WITH ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- STORM DRAIN PIPE SHALL BE PVC 3034 OR SMOOTH BORE POLYETHYLENE (PE) PIPE CONFORMING TO STANDARDS AS AASHTO #294 TYPE S AND ASTM F887, HANDED A/S N-12 OR EQUAL.
- CATCH BASINS SHALL BE THE G-2 PRE-CAST CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. FRAME AND GRATE SHALL BE FABRICATED OF STRUCTURAL STEEL, ASTM A-7, A-36, A-273. CATCH BASIN SUMPS SHALL BE 24" DEEP. CATCH BASINS MAY BE CAST-IN-PLACE.

REVISIONS

NO.	DESCRIPTION	REVISION BY	DATE

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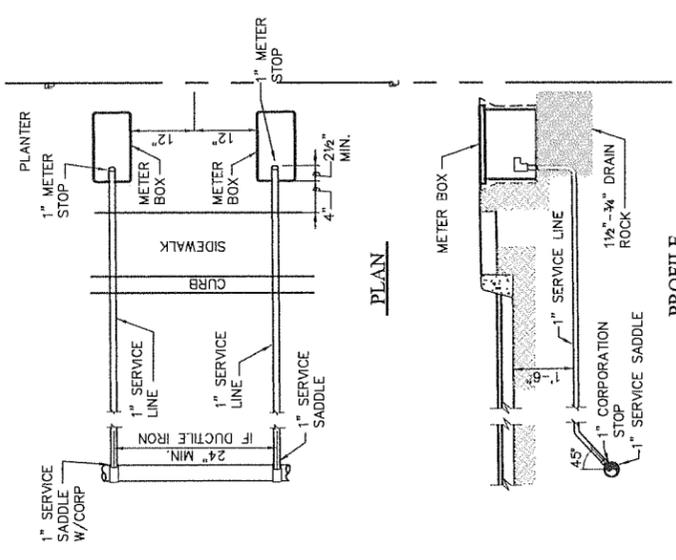
CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST, SUITE 270
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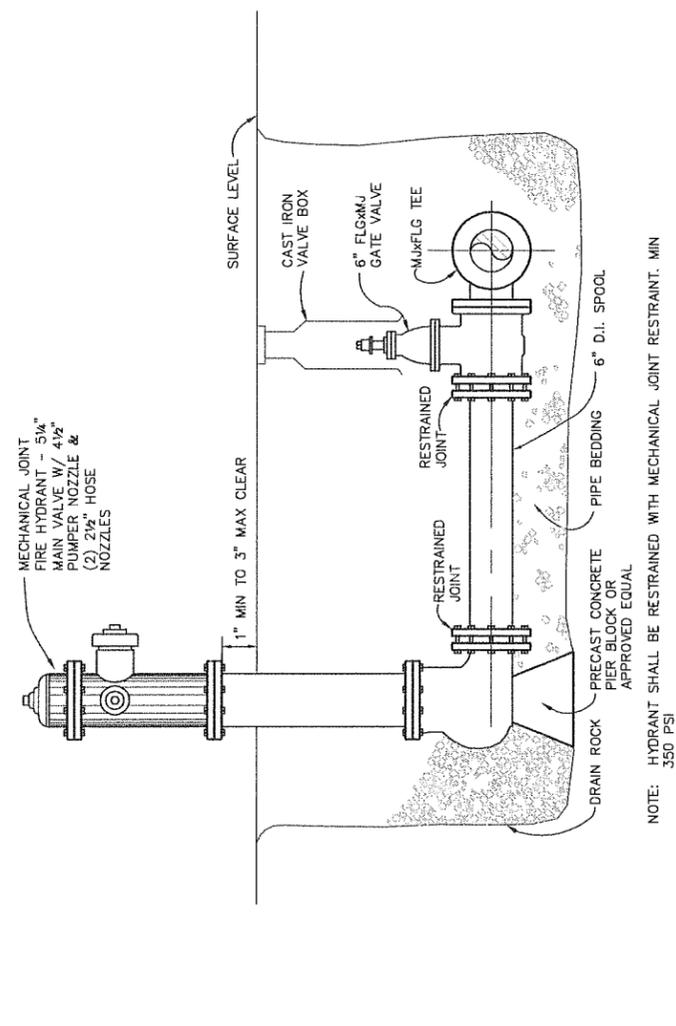
NORTHWOOD ESTATES, PHASE II
**STREET SECTIONS AND
GENERAL CONSTRUCTION NOTES**
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

DATE	FEB 2010
NO.	5
REV.	CAM
BY	RGO
APP.	1391-SHEETS

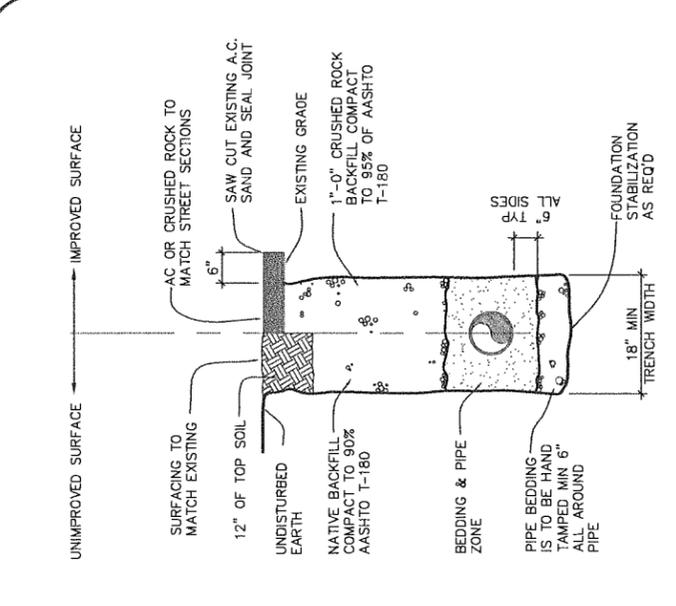
OF 8



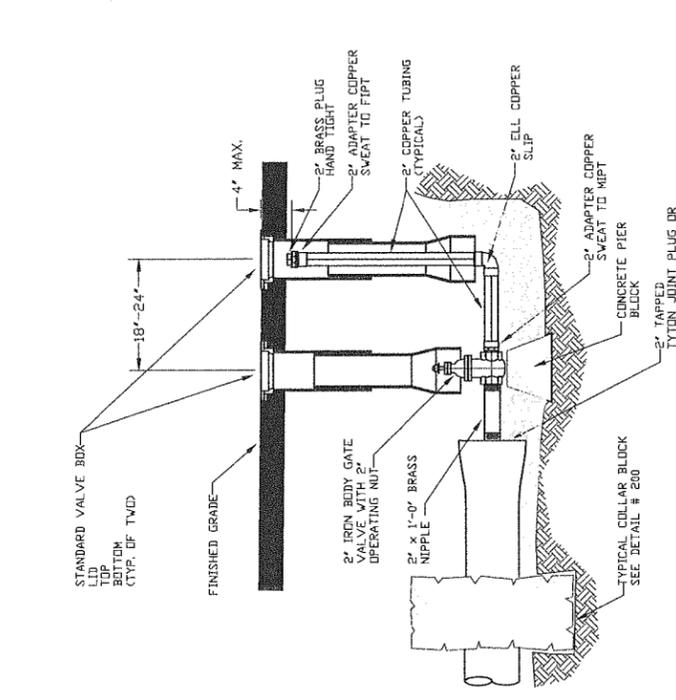
WATER METER
6.1 N.T.S.



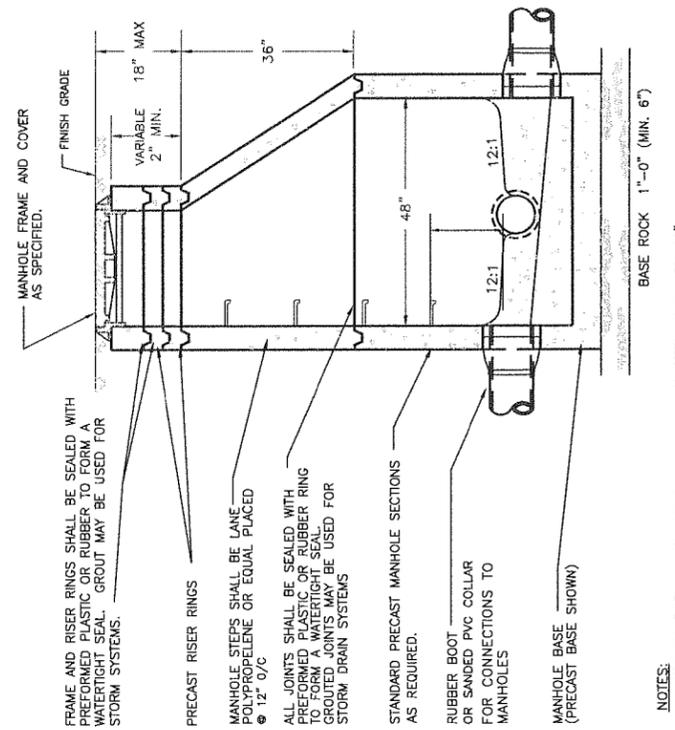
FIRE HYDRANT WITH MECHANICAL JOINT CONNECTIONS
6.1 N.T.S.



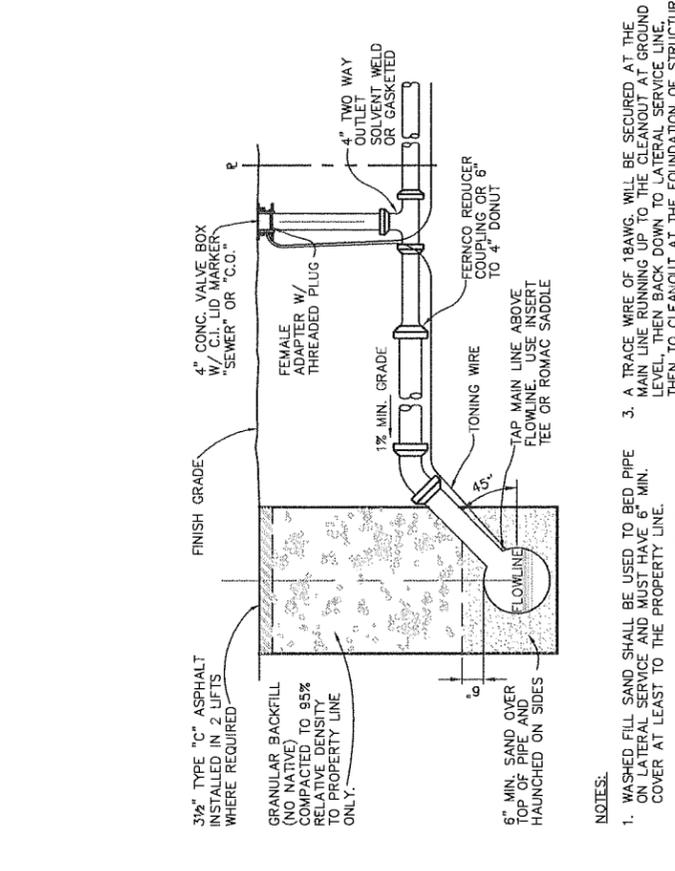
TYPICAL ROAD TRENCH DETAIL
6.1 N.T.S.



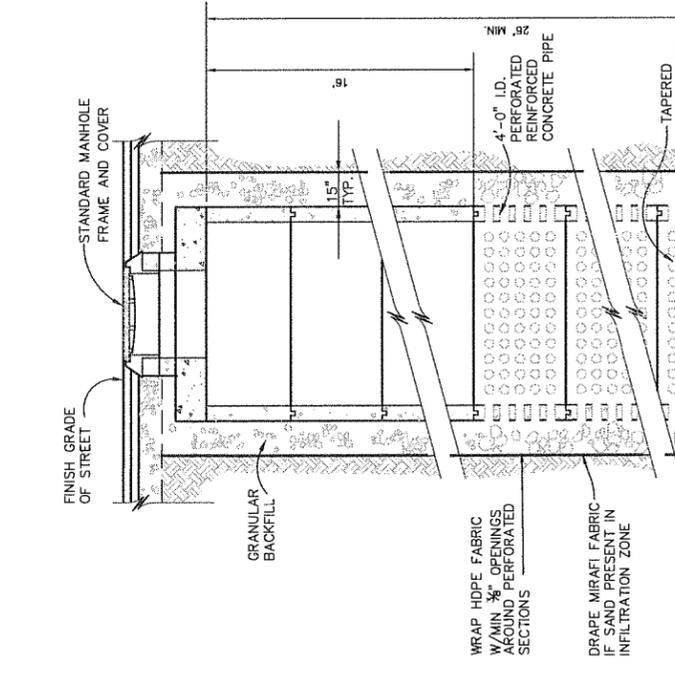
WATER BLOW OFF
6.1 N.T.S.



TYPICAL 48" MANHOLE
6.1 N.T.S.



TYPICAL SANITARY SEWER SERVICE
6.1 N.T.S.



STANDARD DRY WELL
6.1 N.T.S.

5 STANDARD DRY WELL
6.1 N.T.S.

6 TYPICAL 48" MANHOLE
6.1 N.T.S.

7 TYPICAL SANITARY SEWER SERVICE
6.1 N.T.S.

8 TYPICAL CLEANOUT
6.1 N.T.S.

4 TYPICAL ROAD TRENCH DETAIL
6.1 N.T.S.

3 FIRE HYDRANT WITH MECHANICAL JOINT CONNECTIONS
6.1 N.T.S.

2 WATER METER
6.1 NOT TO SCALE

1 WATER BLOW OFF
6.1 N.T.S.

PRELIMINARY

REVISIONS

NO.	DESCRIPTION	DATE

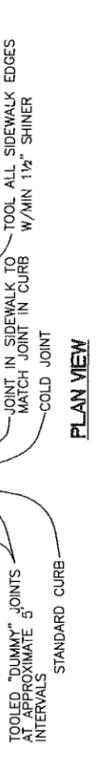
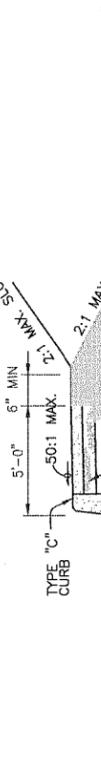
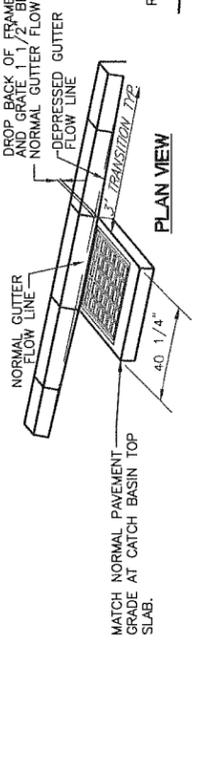
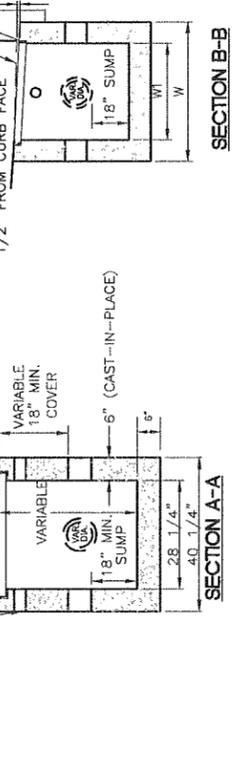
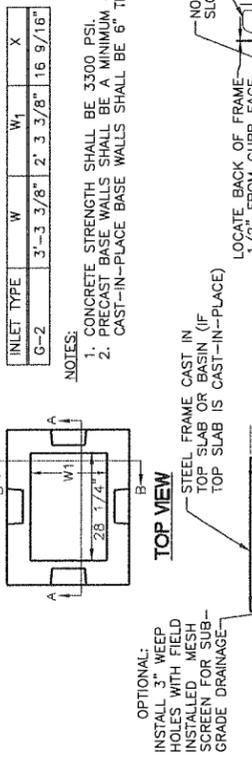
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CURRAN-McLEOD, INC. CONSULTING ENGINEERS
6635 SW HAMPTON ST., SUITE 270
PORTLAND, OREGON 97223
PHONE (503) 684-3478

RESERVED PROFESSIONAL SEAL
CURTIS JAMES
REGISTERED PROFESSIONAL ENGINEER
NO. 11,999
OREGON
EXPIRES: 12/31/2008

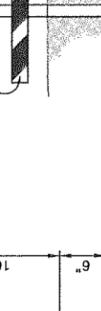
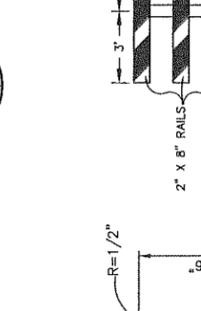
NORTHWOOD ESTATES, PHASE II
DETAIL SHEET
6 OF 8
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

DATE: FEB 2010
BY: J.391
C.M.
RGO
DRAWING: 1391-SHEET6



NOTE:
 PLACE TRUNCATED DOME DETECTABLE WARNING TEXTURE IN THE LOWER 24" OF THE THROAT OF THE RAMP ONLY. ARRANGE DOMES USING IN-LINE PATTERN ONLY AS SHOWN IN DETAIL RIGHT. COLOR OF TEXTURE TO BE SAFETY YELLOW.
 CONCRETE SHALL BE 3300 P.S.I. AT 28 DAYS. 6 SACK MIX, SLUMP RANGE 1 1/2" TO 3".
 PROVIDE CONTRACTION JOINT ON EACH SIDE OF THE RAMP.
 ALL CONSTRUCTION TO CONFORM TO ANSI A117.1-1980.
 ALL S/W AND D/W TO HAVE SCORED JOINTS AT TYP. 5' O.C.
 ALL JOINTS AND SLAB EDGES TO HAVE MIN 1 1/2" TOOLED SHINER.

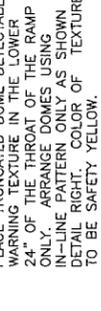
2 ADA RAMP AT CURB RETURN
 7. N.T.S.



5 STANDARD CURB DETAIL
 7. N.T.S.

NOTE:
 PLACE TRUNCATED DOME DETECTABLE WARNING TEXTURE IN THE LOWER 24" OF THE THROAT OF THE RAMP ONLY. ARRANGE DOMES USING IN-LINE PATTERN ONLY AS SHOWN IN DETAIL RIGHT. COLOR OF TEXTURE TO BE SAFETY YELLOW.
 CONCRETE SHALL BE 3300 P.S.I. AT 28 DAYS. 6 SACK MIX, SLUMP RANGE 1 1/2" TO 3".
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 ALL S/W AND D/W TO HAVE SCORED JOINTS AT TYP. 5' O.C.
 ALL JOINTS AND SLAB EDGES TO HAVE MIN 1 1/2" TOOLED SHINER.

6 BARRICADE DETAIL
 7. N.T.S.



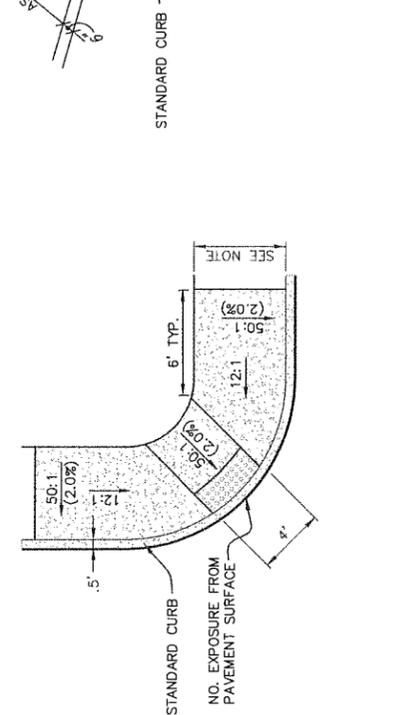
8 ADA RAMP WITH PLANTER STRIP
 7. N.T.S.

NOTE:
 PLACE TRUNCATED DOME DETECTABLE WARNING TEXTURE IN THE LOWER 24" OF THE THROAT OF THE RAMP ONLY. ARRANGE DOMES USING IN-LINE PATTERN ONLY AS SHOWN IN DETAIL RIGHT. COLOR OF TEXTURE TO BE SAFETY YELLOW.
 CONCRETE SHALL BE 3300 P.S.I. AT 28 DAYS. 6 SACK MIX, SLUMP RANGE 1 1/2" TO 3".
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 ALL S/W AND D/W TO HAVE SCORED JOINTS AT TYP. 5' O.C.
 ALL JOINTS AND SLAB EDGES TO HAVE MIN 1 1/2" TOOLED SHINER.

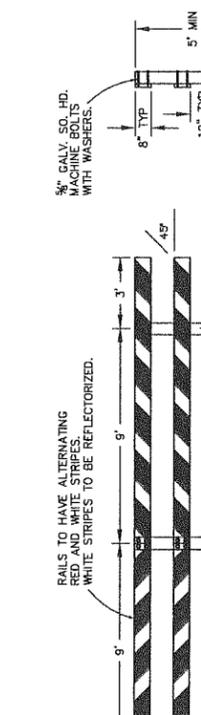
7 TYPICAL DRIVEWAY SECTION
 7. N.T.S.



4 TYPICAL SIDEWALK
 7. N.T.S.



2 ADA RAMP AT CURB RETURN
 7. N.T.S.



3 TYPICAL DRIVEWAY SECTION
 7. N.T.S.



6 BARRICADE DETAIL
 7. N.T.S.



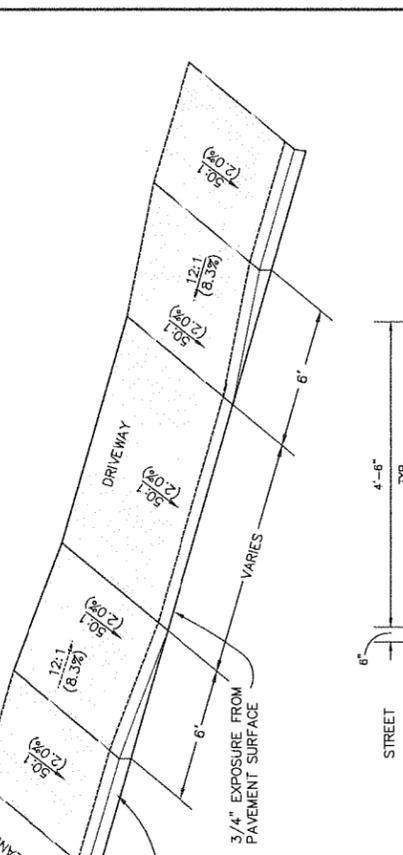
8 ADA RAMP WITH PLANTER STRIP
 7. N.T.S.



7 TYPICAL DRIVEWAY SECTION
 7. N.T.S.



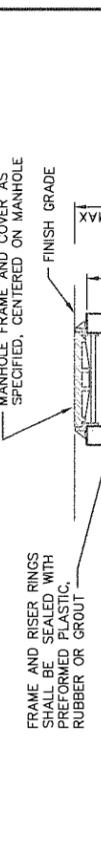
4 TYPICAL SIDEWALK
 7. N.T.S.



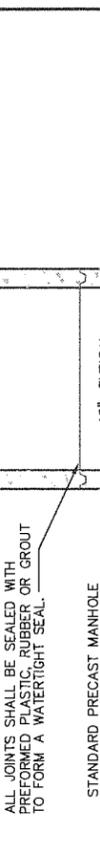
2 ADA RAMP AT CURB RETURN
 7. N.T.S.



3 TYPICAL DRIVEWAY SECTION
 7. N.T.S.



6 BARRICADE DETAIL
 7. N.T.S.



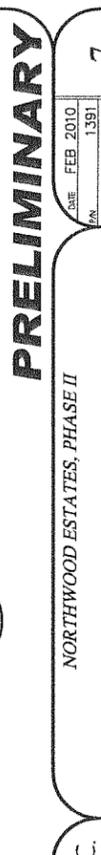
8 ADA RAMP WITH PLANTER STRIP
 7. N.T.S.



7 TYPICAL DRIVEWAY SECTION
 7. N.T.S.



4 TYPICAL SIDEWALK
 7. N.T.S.



PRELIMINARY
 NORTHWOOD ESTATES, PHASE II
 DETAIL SHEET
 CITY OF CANBY
 CLACKAMAS COUNTY, OREGON

DATE	BY	CHKD	APP'D
FEB 2010	1391	CJM	RCO
		1391-SHEET7	

7 OF 8

CURRAN-McLEOD, INC.
 CONSULTING ENGINEERS
 6655 SW HAMPTON ST. SUITE 210
 PORTLAND, OREGON 97223
 PHONE (503) 684-3478

REVISIONS

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.

DATE: FEB 2010
 BY: 1391
 CHKD: CJM
 APP'D: RCO
 DRAWING: 1391-SHEET7

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REVISIONS

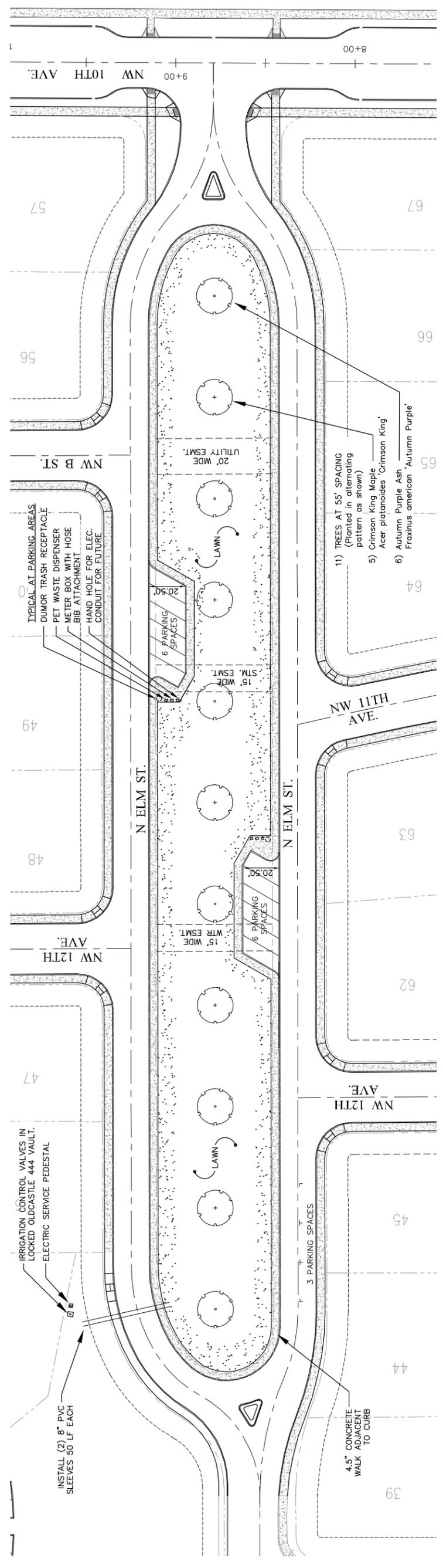
DATE: FEB 2010
 BY: 1391
 CHKD: CJM
 APP'D: RCO
 DRAWING: 1391-SHEET7

7 OF 8

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REV	DESCRIPTION	DATE

REVISIONS



N. ELM STREET LANDSCAPE PLAN
 SCALE: 1" = 60'

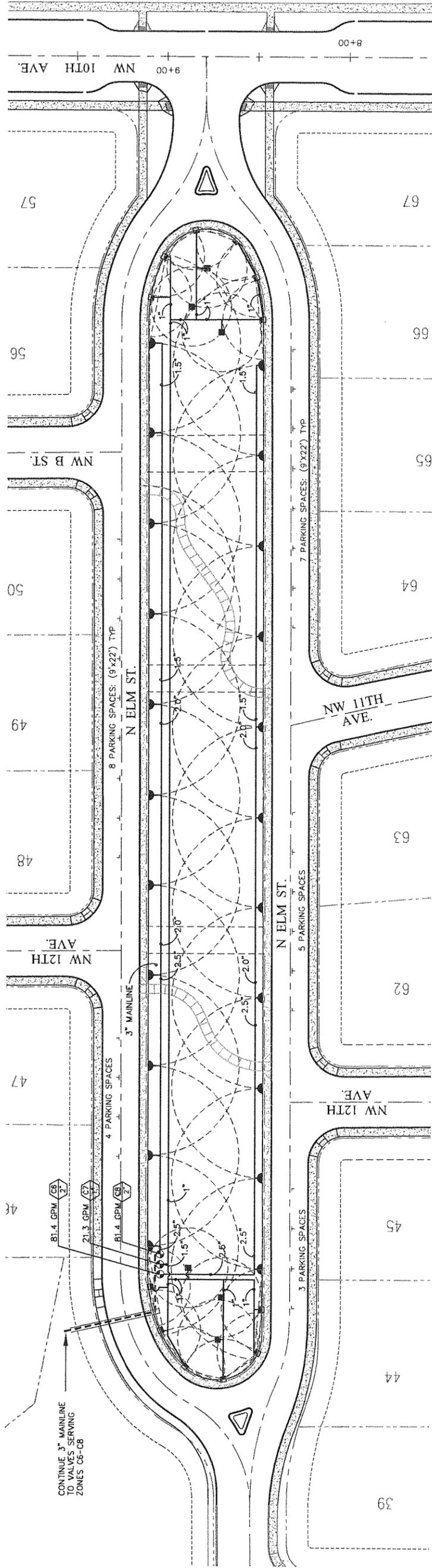
- 11) TREES AT 55' SPACING
 (Planted in alternating pattern as shown)
 5) Crimson King Maple
 Acer platanoides 'Crimson King'
 6) Autumn Purple Ash
 Fraxinus american 'Autumn Purple'

TYPICAL AT PARKING AREAS
 DUMOR TRASH RECEPTACLE
 PET WASTE DISPENSER
 METER BOX WITH HOSE
 BIB ATTACHMENT
 HAND HOLE FOR ELEC.
 CONDUIT FOR FUTURE

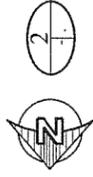
IRRIGATION CONTROL VALVES IN
 LOCKED OLDCASTLE 444 VAULT.
 ELECTRIC SERVICE PEDESTAL

INSTALL (2) 8" PVC
 SLEEVES 50 LF EACH

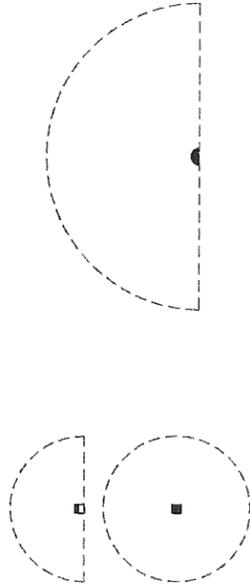
4.5" CONCRETE
 WALK ADJACENT
 TO CURB



N. ELM STREET IRRIGATION PLAN
SCALE: 1" = 60'



DESIGN ASSUMPTIONS:



RAINBIRD: 3500 SERIES BASED ON 55 PSI TRIANGULAR SPACING
22' RADIUS
1.18 GPM
NOZZEL 1.5
PREC. RATE 0.54 IN/HR

RAINBIRD: FALCON 6504 BASED ON 50 PSI RECTANGULAR SPACING
51' RADIUS
7.4 GPM
NOZZEL B
PREC. RATE 0.55 IN/HR

PIPE SIZING GUIDELINE (CLASS 200)	
PIPE SIZE	ACCEPTABLE FLOW
1"	11 - 16 GPM
1-1/2"	17 - 35 GPM
2"	36 - 55 GPM
2-1/2"	55 - 80 GPM
3"	80 - 120 GPM



VALVE SIZE

REV	DESCRIPTION	REVISOR	DATE

REVISIONS



CURRAN-MCLEOD, INC.
CONSULTING ENGINEERS
6655 SW HAMPTON ST., SUITE 210
PORTLAND, OREGON 97223
PHONE (503) 684-3478

NORTHWOOD ESTATES, PHASE II
IRRIGATION PLAN
NORTH ELM STREET PARK
CITY OF CANBY
CLACKAMAS COUNTY, OREGON

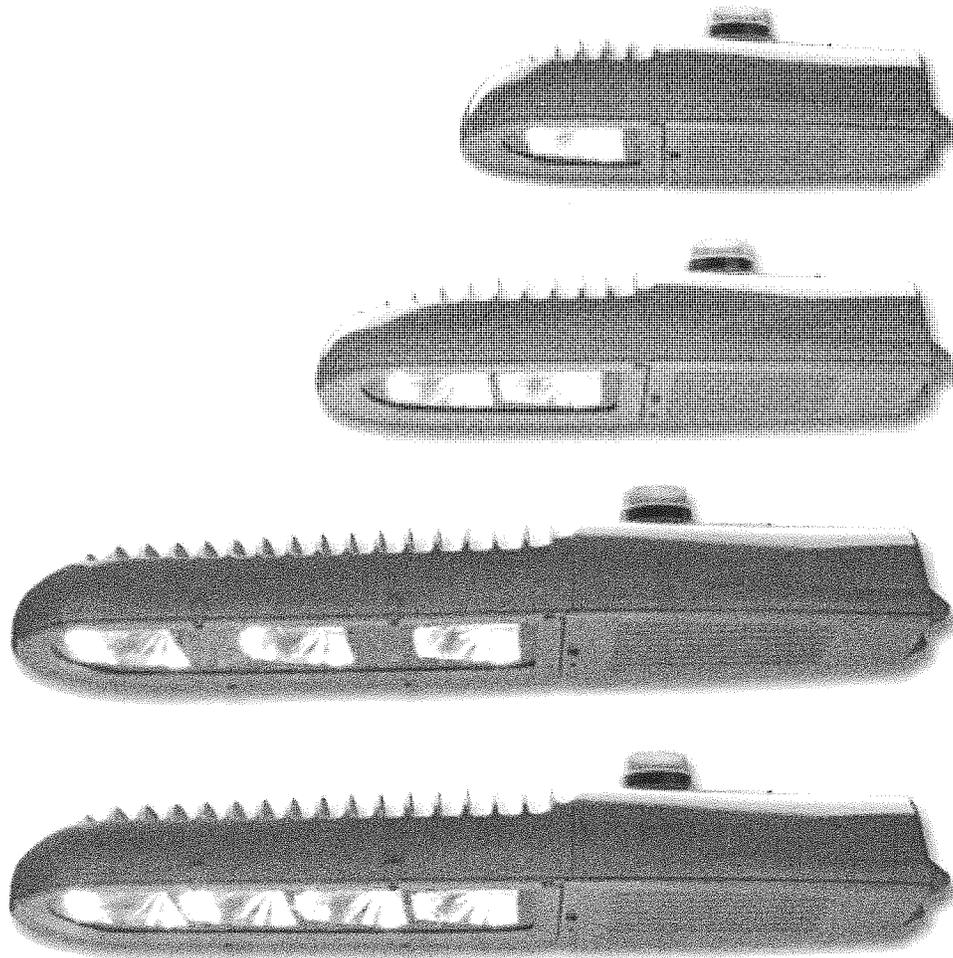
PRELIMINARY

DATE	NOV 2013
REV	1,391
BY	CJM
CHK	DCA
DATE	1,391-PORTA
BY	

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OF
2

Evolve™ LED Roadway Lighting

Scalable Cobrahead (ERS1, ERS2, ERS3 & ERS4)



Product Features

From local to major roadways, the GE Evolve™ LED Roadway Scalable Cobrahead fixtures are changing the way you light your lanes. Preserving the aesthetic look of traditional roadway Cobrahead fixtures, GE balances the technical needs of a sophisticated LED system with the functional demands of an outdoor fixture facing extreme weather hazards. GE's advanced LED optical design offers hundreds of photometric options to meet your precise lighting requirements, while delivering reduced glare and improved light control. The refined thermal management system incorporates a sleek and robust heat sink directly into the fixture to ensure maximum heat transfer and long LED life.

The GE Evolve LED Roadway Scalable Cobrahead offers more than 11 years of reliable service life to significantly reduce maintenance frequency and expense, based on a 50,000 hour life and 12 hours of operation per day. This efficient fixture can yield up to a 50-percent reduction in system energy compared with standard HID systems, depending on roadway applications, and can also be paired with programmable dimming options for even greater savings and control.

Applications

- Designed to meet recommended luminance and illuminance requirements for local to major roadway / street classifications.

Housing

- Die cast aluminum housing.
- A modern design preserving the aesthetic look of traditional roadway Cobrahead fixtures incorporates the heat sink directly into the unit ensuring maximum heat transfer and long LED life.
- Meets 2G vibration per C136.31-2010 For 3G rating contact manufacturer.
- Power door assembly with removable retention latch.

LED & Optical Assembly

- Structured LED array for optimized roadway photometric distribution.
- Evolve light engine consisting of scalable reflective technology designed to optimize application efficiency and minimize glare.
- Reverse facing light engine options available.
- Utilizes high brightness LEDs, 70 CRI at 4000K & 5700K typical.
- LM-79 tests and reports are performed in accordance with IESNA standards.

Lumen Maintenance

- System rating is L85 at 50,000 hours. Contact manufacturer for Lxx rating (Lumen Depreciation) beyond 50,000 hours.

Ratings

- /  listed, suitable for wet locations per UL 1598.
- IP65 rated optical enclosure per ANSI C136.25-2009.
- Temperature rated at -40° to 50°C (-40° to 45°C for ERS4 347-480V fixtures).
- Upward Light Output Ratio (ULOR) = 0.

Mounting

- Slipfitter with +/- 5 degree of adjustment for leveling.
- Integral die cast mounting pipe stop feature.
- Wildlife intrusion protection at mounting pipe entry.
- Adjustable for 1.25 in. or 2 in. mounting pipe.

Finish

- Corrosion resistant polyester powder painted, minimum 2.0 mil. thickness.
- Standard colors: Black and Gray.
- RAL & custom colors available.

Electrical

- 120-277 volt and 347-480 volt available.
- System power factor is >90% and THD <20%.*
- Class "A" audible sound rating.
- Integral surge protection:
 - For 120-277VAC per IEEE/ANSI C62.41.-1991, 6kV/3kA Location Category B3 (120 Events).
- Optional high capability surge protection per IEEE/ANSI C62.41.2-2002.
 - Rating 1 - 10kV/5kA Location Category (120 events).
 - Rating 2 - 6kV/3kA Location Category C-Low (5000 events).
- EMI: Title 47 CFR Part 15 Class A.
- Photo electric sensors (PE) available for all voltages.

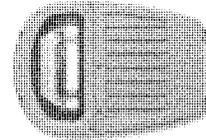
** System power factor and THD is tested and specified at 120V input and maximum load conditions.*

Warranty

- 5-year limited system warranty standard.

Ordering Number Logic

Scalable Cobrahead (ERS1)



ERS1 - - - - - 5 - - - - -

PROD. ID	VOLTAGE	OPTICAL CODE	PHOTOMETRIC TYPE	DRIVE CURRENT	LED COLOR TEMP	PE FUNCTION	COLOR	OPTIONS
E = Evolve	0 = 120 - 277 H = 347 - 480		AX = Extra Narrow Asymmetric (Medium)	5 = 525mA*	40 = 4000K 57 = 5700K	1 = None 2 = PE Rec. 4 = PE Rec. with Shorting Cap 5 = PE Rec. with Control 7 = Dimming PE Receptacle † 9 = Dimming PE Receptacle with Shorting Cap †	BLCK = Black GRAY = Gray Contact manufacturer for other colors.	C = IEC Construction E = GE Level F = Fusing L = Tool-Less Entry P = Programmable Dimming (includes DALI) T = Extra Surge Protection* XXX = Special Options
R = Roadway	1 = 120* 2 = 208*		BX = Narrow Asymmetric (Medium)	*Standard drive current is 525mA. 350mA and 700mA drive currents designated with a "3" or "7" respectively are available and set at the factory.		PE control not available for multi-volt 346-480V. Must be a discrete voltage (347V or 480V).		* Contact manufacturer for details and availability.
S = Scalable	3 = 240* 4 = 277*		CX = Asymmetric (Short)			† When ordering PE function socket 7 or 9, a programmable dimming option "P" must also be ordered under the "OPTIONS" column		
1 = Optical Assembly	5 = 480* D = 347*		DX = Asymmetric Forward (Very Short) EX = Asymmetric (Medium)					
	*Specify single voltage only if fuse option is selected.							

OPTICAL CODE	PHOTOMETRIC TYPE	TYPICAL INITIAL LUMENS		TYPICAL SYSTEM WATTAGE		IES FILE NUMBERS	
		4000K	5700K	120-277V	347-480V	4000K	5700K
AX	AX	3100	3300	43	47	454886	454889
BX		4100	4400	54	59	454887	454890
CX		5100	5500	67	74	454888	454891
AX	BX	3300	3400	43	47	454669	454668
BX		4300	4600	54	59	454670	454667
CX		5300	5700	67	74	454659	454666
AX	CX	3200	3400	43	47	454662	454663
BX		4200	4500	54	59	454661	454665
CX		5200	5600	67	74	454660	454665
AX	DX	3300	3500	43	47	454892	454895
BX		4300	4600	54	59	454893	454896
CX		5300	5700	67	74	454894	454897
AX	EX	3000	3200	43	47	454653	454644
BX		4000	4300	54	59	454652	454645
CX		5000	5400	67	74	454651	454646

Photometrics

Scalable Cobrahead (ERS1)

ISO Plot

Grid Distance in Units of Mounting Height at 30° Initial Footcandle Values at Grade

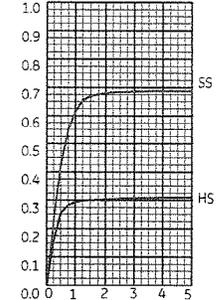
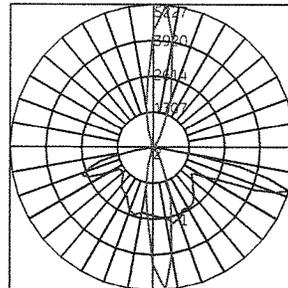
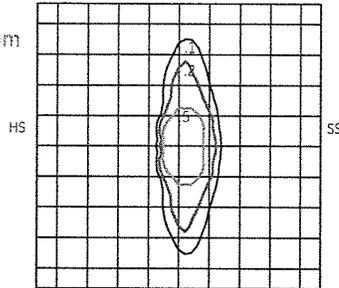
Polar Curve

Polar Trace Vertical and Horizontal Plane through Horizontal Angle of Maximum Candpower

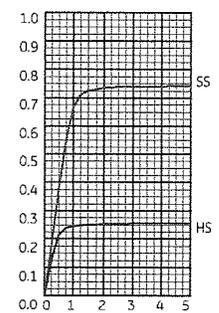
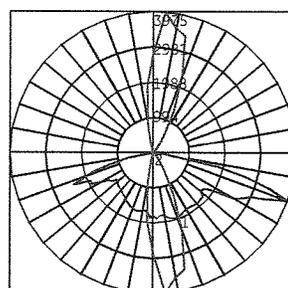
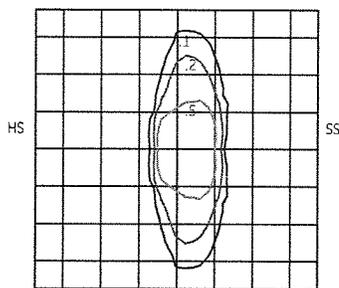
CU Graph

Coefficients of Utilization Street Width / Mounting Height

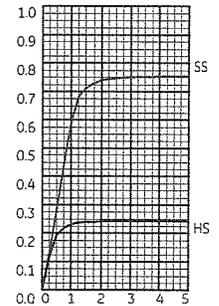
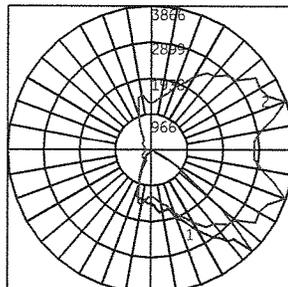
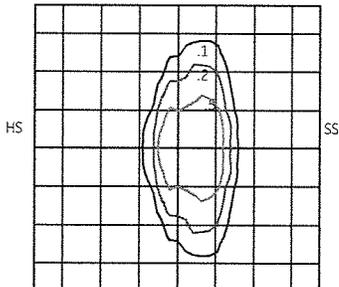
ERS1
Extra Narrow Asymmetric Medium
(CXAX)
5,500 Lumens
5700K
GE454891.ies



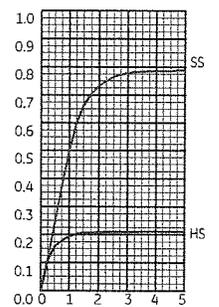
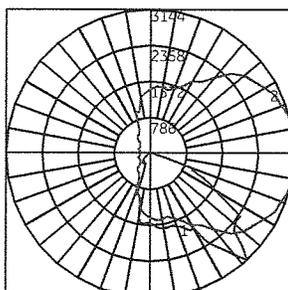
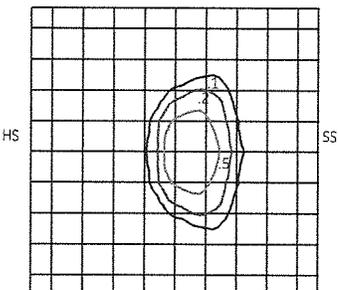
ERS1
Narrow Asymmetric Medium
(CXBX)
5,700 Lumens
5700K
GE454666.ies



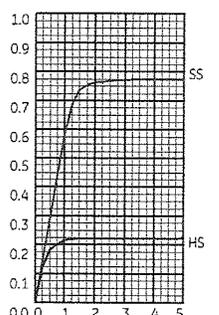
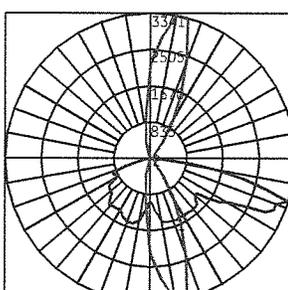
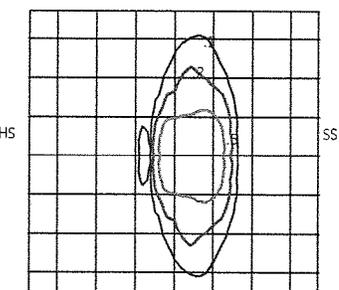
ERS1
Asymmetric Short
(CXCX)
5,600 Lumens
5700K
GE454665.ies



ERS1
Asymmetric Forward Very Short
(CXDX)
5,700 Lumens
5700K
GE454897.ies



ERS1
Asymmetric Medium
(CXEX)
5,400 Lumens
5700K
GE454646.ies



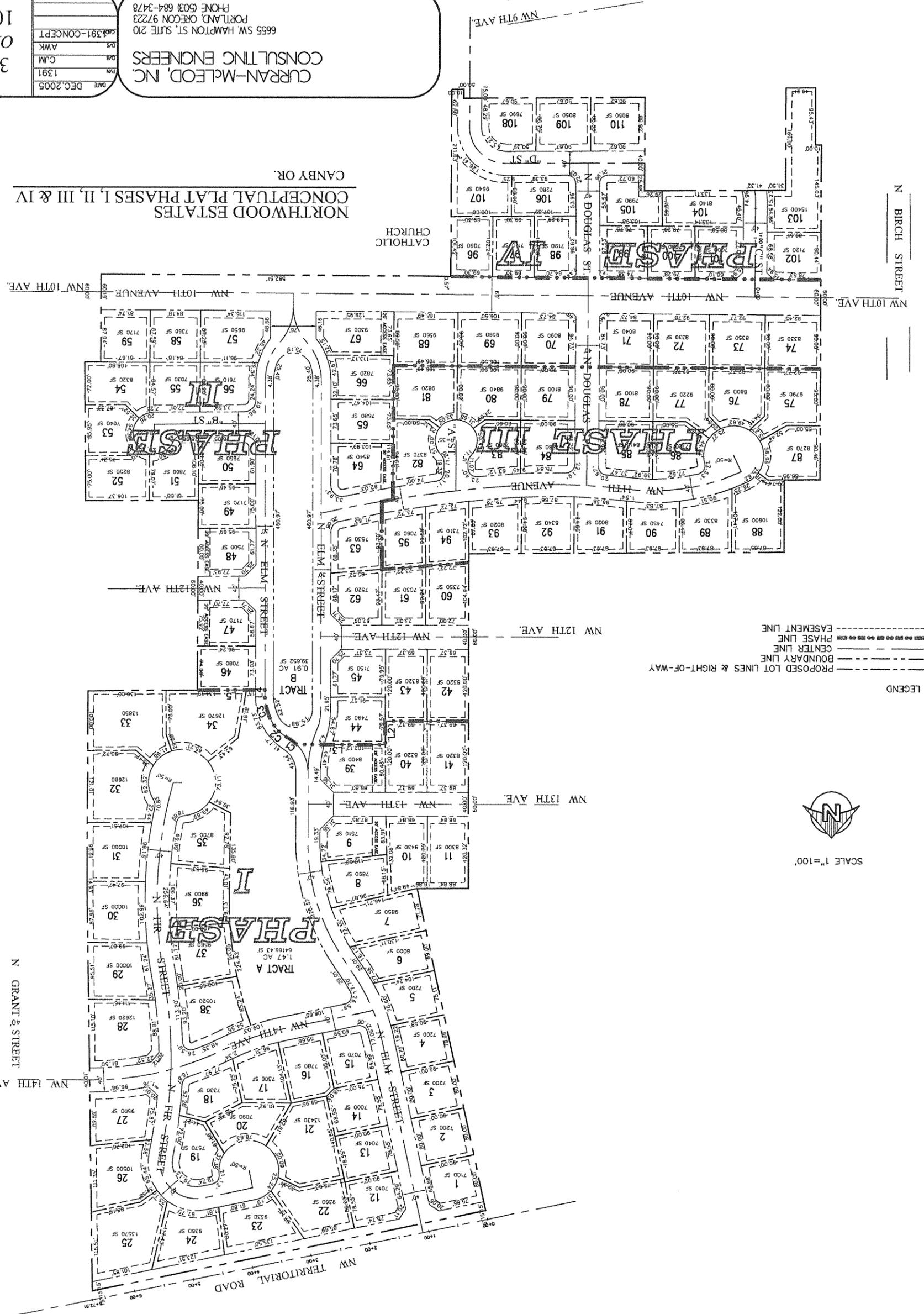
10
OF
3

DATE	DEC. 2005
DRAWN	1391
CHECKED	CJM
DESIGNED	AWK
PROJECT	6655 SW HAMPTON ST. SUITE 210 PORTLAND, OREGON 97223 PHONE (503) 684-3478
CONCEPT	6655 SW HAMPTON ST. SUITE 210 PORTLAND, OREGON 97223 PHONE (503) 684-3478

CURRAN-MLEOD, INC.
CONSULTING ENGINEERS

NORTHWOOD ESTATES
CONCEPTUAL PLAT PHASES I, II, III & IV
CANBY OR.

CATHOLIC CHURCH



LEGEND
 --- PROPOSED LOT LINES & RIGHT-OF-WAY
 --- BOUNDARY LINE
 --- CENTER LINE
 --- PHASE LINE
 --- EASEMENT LINE



SCALE 1"=100'

SCALE 1"=100'



SUBDIVISION EASEMENTS

12' P.U.E. ALONG ALL PUBLIC STREET FRONTAGE
 6' P.U.E. ALONG ALL SIDE AND REAR LOT LINES
 EXCEPT 10' P.U.E. ALONG LOT LINES WHERE THEY
 ABUT UNDEVELOPED LAND

LEGEND

- PROPOSED LOT LINES & RIGHT-OF-WAY
- BOUNDARY LINE
- CENTER LINE
- PHASE LINE
- EASEMENT LINE

* LOTS MUST COMPLY WITH
 INFILL REQUIREMENTS OR
 CC&R HEIGHT LIMITATIONS.



**NORTHWOOD ESTATES, CANBY OR.
 CONCEPTUAL DEVELOPMENT PLAN**

CANBY OR.
 DECEMBER 29, 2005

**CURRAN-McLEOD, INC.
 CONSULTING ENGINEERS**

6655 SW HAMPTON ST, SUITE 210
 PORTLAND, OREGON 97223
 PHONE (503) 684-3478

DATE	DEC.2005
PLAN	1391
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CONTRACT	1391-CONCEPT

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**CITY OF CANBY
NORTWOOD ESTATES, PHASES I-IV**

DRAINAGE REPORT

October 6, 2006

CURRAN-MCLEOD, INC.
6655 SW Hampton St, Suite 210
Portland, OR 97223

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INTRODUCTION:

The complete proposed Northwood Estates consists of four phases and composed of 110 residential lots including the existing house on lot 21 and local streets covering approximately 31.50 acres. The site slopes northward at nearly 2% toward NW Territorial Road.

LOCATION:

543 NW Territorial Rd
Canby, Oregon
Tax Lot 800, Tax Map 3E32AA
Tax Lot 6600, Tax Map 1E33BC
Tax Lots 100, 200 and 1700, Tax Map 1E32AD
Tax Lots 300, 400 and a portion of 501, Tax Map 3E33BB

North of the site is NW territorial Rd, to the east and west are existing residential developments and to the south is NW 9th Avenue.

PURPOSE:

The purpose of this drainage report is to demonstrate that the proposed drywells and infiltration trench will adequately convey the street, sidewalks and driveways runoff generated from the 10-yr storm frequency as required by City of Canby standards. All individual lots will be required to drain to an approved on-site facility at the time of the building permit.

METHODS:

Runoff Santa Barbara Urban Hydrograph Methodology (SBUHM)
Intensity 10-Yr, 24-Hour Duration Rainfall Intensity; 3.00-inches based on NOAA Atlas 2, Volume X
TC Time of Concentration was selected to be 5 minutes and is the most conservative.
Curve # CN = 98

Darcy’s Law Equation was used to compute the available capacity in the drywells.

Manning’s Equation was used to compute the available capacity in the infiltration trench.

The runoff will be collected into catchbasins then piped into a sedimentation manholes to trap pollutants, silt, oil and grease, etc.. prior to entering the drywells. Five basins will enter a grassy bioswale and then into an infiltration trenches.

INFILTRATION:

The site and nearby properties have canderly sandy loam soils with moderately rapid permeability. Percolation tests rate used in design is 32 in/hr as recommended by Northwest Geotechnical Engineer and was performed on an adjoining property. Safety factor of 2 was applied to the design. As requested by the City engineer, a map showing the proximity of the infiltration tests was faxed. The drywells will be tested for capacity in the field in the post construction stage, if capacity was not attained as designed, then additional measures will be implemented to achieve the necessary capacity. However, one infiltration trench is proposed as requested by DEQ and was designed using 8 in/hr infiltration rates as per geotechnical engineer recommendation. Safety factor of 2 was also applied to the design.

AREAS/ RUNOFF:

The site is divided into twenty one (21) basins with drainage areas vary between 0.38 acres and 0.64 acres. Sixteen (16) of the basins discharge into drywells and five basins discharge into bioswales and then into infiltration trenches. We have analyzed all the basins for flow and capacity and sized the conveyance facilities accordingly.

CONCLUSIONS:

As is typical of Canby, there is no adequate storm water system near the project site. The only feasible option to dispose the storm runoff is through percolation methods. The attached analysis indicate that the storm runoff following the 10-yr storm event can be conveyed within the drywells through percolation and temporary storage within the sedimentation manholes, drywells, rock liners around the exterior of the drywells and piping.

Temporary storage available is approximately 560 cubic feet and will occur within the sedimentation manhole, the drywells and in the rock liner surrounding the exterior of the drywells. Rock thickness is assumed to be 18 inches and the void ratio is 40%. The attached drainage basin map shows a tabulation for the required flows to each drywell and the available capacity in a drywell (0.48 cfs).

Bioswales and infiltration trenching will be used along NW 10th Ave as recommended by DEQ. Bioswales will be used for treatment and infiltration trenching (4'x4'x4') for conveyance. The required infiltration trench length was calculated and tabulated on the attached drainage basin map.

The design shows some of the drainage basins discharge into a series of drywells or infiltration trenches in an effort to distribute the flows uniformly.

DRYWELL DESIGN CRITERIA

INFILTRATION RATE = 32 IN/HR
 SAFTY FACTOR = 2
 GRASSY CURVE # = 80
 IMPERVIOUS SURFACE CURVE # = 98
 10YR-24HR PERCIPITATION RATE = 3.00 IN
 TIME OF CONCENTRATION = 5 MIN
 HEAD ELEVATION = 26FT

INFILTRATION TRENCH DESIGN CRITERIA

INFILTRATION RATE = 8 IN/HR
 SAFTY FACTOR = 2
 GRASSY CURVE # = 80
 IMPERVIOUS SURFACE CURVE # = 98
 10YR-24HR PERCIPITATION RATE = 3.00 IN
 TIME OF CONCENTRATION = 5 MIN
 INFILTRATION TRENCH DIMENSIONS 4'x4'

DRYWELL TABLE					
BASIN #	DRYWELL #	AREA (SF)	AREA (AC)	REQUIRED CAPACITY (CFS)	AVAILABLE CAPACITY (CFS)
1	1	24,810	0.57	0.44	0.48
2	2	26,728	0.61	0.47	0.48
3	3	20,359	0.47	0.37	0.48
4	4	21,152	0.49	0.38	0.48
5	5	18,564	0.43	0.33	0.48
6	6	16,787	0.38	0.30	0.48
7	7	23,648	0.54	0.42	0.48
8	8	15,607	0.36	0.28	0.48
9	9, 10 & 11	*22,913	*0.53	*0.41	0.48
10					0.48
11					0.48
12					0.48
13					0.48
14	12 & 13	*20,213	*0.46	*0.36	0.48
15		*20,213	*0.46	*0.36	0.48
16	16	17,412	0.40	0.31	0.48

* AVERAGE AREA

INFILTRATION TRENCH TABLE							
BASIN #	INFILTRATION TRENCH #	IMPERVIOUS AREA (SF)	IMPERVIOUS AREA (AC)	PERVIOUS AREA (SF)	PERVIOUS AREA (AC)	REQUIRED FLOW (CFS)	REQUIRED INFILTRATION TRENCH LENGTH (FT)
17	17	15,491	0.36	2,422	0.06	0.30	270
18	18	7,859	0.18			0.14	126
19	19	27,807	0.64	5,016	0.12	0.53	477
20	20	7,831	0.18			0.14	126
21	21	25,148	0.58	3,088	0.07	0.47	423
TOTAL							1422

A TOTAL OF 1422 LF OF BIO SWALE/INFILTRATION TRENCH WILL BE CONSTRUCTED ALONG COMMISSION AVENUE ON BOTH SIDES.

When the drywells are constructed we will field test two drywells for capacity to ensure the design percolation rates are met.

SBUH/SCS METHOD FOR COMPUTING RUNOFF HYDROGRAPH

STORM OPTIONS:

- 1 - S.C.S. TYPE-1A
- 2 - 7-DAY DESIGN STORM
- 3 - STORM DATA FILE

SPECIFY STORM OPTION:

1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION

ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)

10 24 3

***** S.C.S. TYPE-1A DISTRIBUTION *****
***** 10-YEAR 24-HOUR STORM ***** 3.00" TOTAL PRECIP. *****

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1

0 0 0.57 98 5

DATA PRINT-OUT:

AREA(ACRES)	PERVIOUS	IMPERVIOUS	TC(MINUTES)
A	CN	A	CN
.6	.0	.6	98.0 5.0

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.44	7.67	5727

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:

basin1

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 2

0 0 0.61 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.6	.0	.0	.6	98.0		5.0

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.47	7.67	6129

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin2

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 3
0 0 0.47 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.5	.0	.0	.5	98.0		5.0

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.37	7.67	4722

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin3

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 4
0 0 0.49 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
-------------	--	----------	--	------------	--	-------------

A CN A CN
.5 .0 .0 .5 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.38 7.67 4923

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin4

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 5
0 0 0.43 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)
A CN A CN
.4 .0 .0 .4 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.33 7.67 4320

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin5

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 6
0 0 0.38 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)
A CN A CN
.4 .0 .0 .4 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.30 7.67 3818

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin6

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 7
0 0 0.54 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.5	.0	.0	.5	98.0		5.0

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.42	7.67	5426

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin7

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 8
0 91 0.36 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.4	.0	91.0	.4	98.0		5.0

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.28	7.67	3617

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin8

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASINS NO. 9-13
0 0 1.61 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
1.6	.0	.0	1.6	98.0	5.0	

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
1.25	7.67	16178

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin9-13

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASINS NO. 14-15
0 0 0.46 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.5	.0	.0	.5	98.0	5.0	

PEAK-Q(CFS)	T-PEAK(HRS)	VOL(CU-FT)
.36	7.67	4622

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin14-15

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 16
0 0 0.40 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)
A CN A CN
.4 .0 .0 .4 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.31 7.67 4019

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin16

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 17

0.06 80 0.36 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)
A CN A CN
.4 .1 80.0 .4 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.30 7.67 3889

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin17

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 8

0 0 0.18 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)
A CN A CN
.2 .0 .0 .2 98.0 5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.14 7.67 1808

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin18

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 19
0.12 80 0.64 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.8	.1	80.0	.6	98.0		5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.53 7.67 6975

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin19

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP
c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 20
0 0 0.18 98 5

DATA PRINT-OUT:

AREA(ACRES)		PERVIOUS		IMPERVIOUS		TC(MINUTES)
A	CN	A	CN			
.2	.0	.0	.2	98.0		5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)
.14 7.67 1808

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin20

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

c

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 21
0.07 80 0.58 98 5

DATA PRINT-OUT:

AREA(ACRES) PERVIOUS IMPERVIOUS TC(MINUTES)

A		CN			
.6	.1	80.0	.6	98.0	5.0

PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT)

.47	7.67	6145
-----	------	------

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
basin21

SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP

s

DRY WELL CAPACITY COMPUTATION:

USING DARCY'S LAW

$$Q = \frac{KHA}{L}$$

INFILTRATION RATE 32 in/hr, S.F. = 2

$$K = 16 \text{ in/hr} \left(\frac{1 \text{ ft}}{12 \text{ in}} \right) \left(\frac{1 \text{ hr}}{3600 \text{ sec}} \right) = 0.0004 \text{ ft/sec}$$

$$H = 26 \text{ ft}$$

A = 5 ft outside diameter + 1.5 ft Rock UNDER

AROUND DRYWELL $\Rightarrow D = 8 \text{ ft}$

$$A = 50.3 \text{ ft}^2$$

$$L = 1 \text{ ft}$$

$$Q = \frac{0.0004 \text{ ft/sec} * 26 \text{ ft} * 50.3 \text{ ft}^2}{1 \text{ ft}} = \underline{\underline{0.48 \text{ cfs}}}$$

INFILTRATION TRENCH COMPUTATION:

Q = Wetted perimeter * Length * infiltration

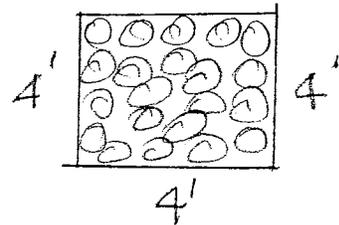
$$L = \frac{Q}{W_p * I}$$

$$I = 8 \text{ in/hr}, \text{ S.F.} = 2 \Rightarrow I = 4 \text{ in/hr} \left(\frac{1 \text{ ft}}{12 \text{ in}} \right) \left(\frac{1 \text{ hr}}{3600 \text{ sec}} \right) = 0.0001 \text{ ft/sec}$$

$$W_p = 12 \text{ ft}$$

$$L = \frac{0.30}{12 * 0.0001} = 270 \text{ LF}$$

57.5 SF/LF of TRENCH



The estimated slope of the main channel, which in most cases is a pipe, was assigned to provide a positive hydraulic gradient to the basin outlet. The projected slopes provide for reasonable cover at the basin's upper reaches while permitting free drainage to natural waterways at the basin outlet. The identified slopes are also important to identify the required pipeline capacity.

2.4 Precipitation.

In order to project runoff from the basins, meteorological data were needed to estimate rainfall for various storm events. This information was obtained using the 1973 NOAA Atlas 2, Volume X and comparing with the ODOT Zone 8.

For projecting storm water runoff from the basins, it was determined that a 10-year storm event would be appropriate for Canby. This return interval was selected after consideration of the increased cost of designing to greater intervals and the minimal damage caused by intermittent flooding. Selection of this design storm implies that short durations of standing water are anticipated and acceptable for storms which occur in frequencies of once every ten or more years.

To determine the runoff, the HEC-1 program requires data for 5 and 15-minute storms and also 1-, 2-, 3-, 6-, 12- and 24-hour storm events. These data are shown in Table VI-1.

TABLE VI-1
PRECIPITATION DEPTH PER STORM EVENT AND RETURN FREQUENCY

Return Interval (years)	Rainfall (Inches)							
	Storm Duration (minutes)			Storm Duration (hours)				
	5	15	60	2	3	6	12	24
2	0.12	0.23	0.41	0.55	0.69	1.00	1.50	2.00
5	0.17	0.34	0.60	0.77		1.30	1.80	2.5
10	0.20	0.40	0.70	0.92	1.12	1.60	2.40	3.0
25	0.22	0.43	0.75	1.00	1.24	1.80	2.60	3.5
50	0.23	0.46	0.80	1.08	1.36	2.00	3.00	4.0
100	0.27	0.54	0.94	1.08	1.36	2.00	3.00	4.0

Of the storm events needed by the program, only the 6- and 24-hour 10-year storm events as shown in Table VI-1 can be obtained directly from the from the NOAA isopluvials. All other rainfall projections are determined from nomographs or formulas in the atlas. Table VI-1 lists the inches of rainfall determined from methodologies developed by NOAA and evaluation of the ODOT curves.

From the data and calculations generated from the NOAA information, a Precipitation Frequency Diagram can be generated that indicates the precipitation depth for each return period in years. Figure VI-2 shows the results of fitting a line to the data points in Table VI-1.

2.5 Storm duration.

In modeling runoff from each basin, it is important to assure that the synthetic storm is of adequate duration to properly estimate basin runoff. If the storm duration is too short, runoff from the basin will not be as high as expected; too long and the flows will be less than expected peaks.

DEPARTMENT OF AGRICULTURE

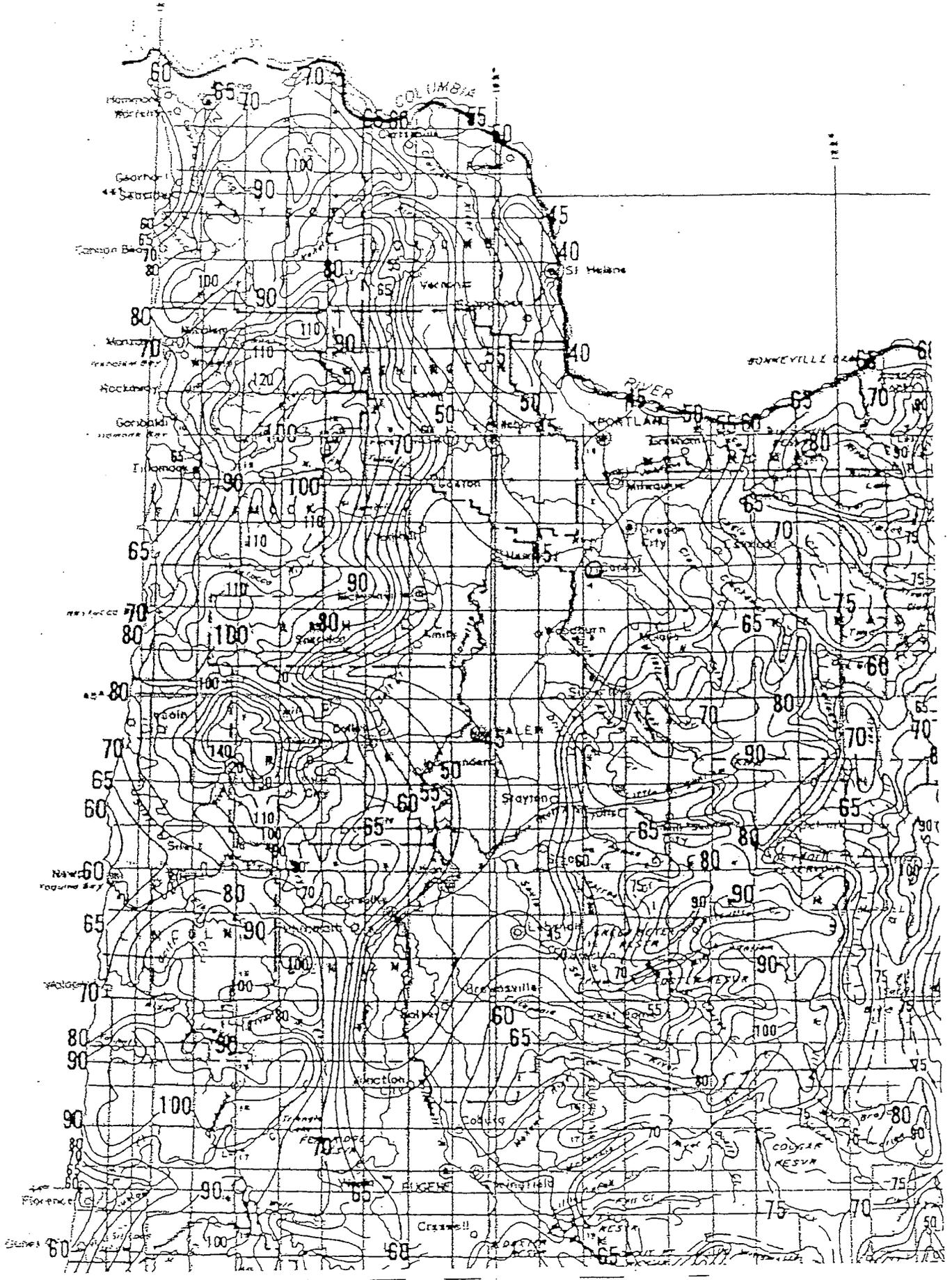


TABLE 14.--SOIL AND WATER FEATURES

["Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern]

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth Ft	Kind	Months	Depth In	Hard-ness	Uncoated steel	Concrete
1A, 1B Aloha	C	None	---	---	1.0-2.0	Perched	Dec-Apr	>60	---	Moderate	Moderate.
2B, 2C, 2D, 2E Alsbaugh	C	None	---	---	>6.0	---	---	>60	---	High	High.
3 Amity	D	None	---	---	0.5-1.5	Apparent	Nov-May	>60	---	Moderate	Moderate.
4E, 4F. Andic Cryaquepts											
5D, 5E Aschoff	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
6F*: Aschoff	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
Brightwood	B	None	---	---	>6.0	---	---	20-40	Hard	Moderate	Moderate.
7B Borges	D	None	---	---	0-0.5	Perched	Dec-Apr	>60	---	Moderate	Moderate.
8B, 8C, 8D Bornstedt	C	None	---	---	2.0-3.0	Perched	Dec-Apr	>60	---	High	High.
9B, 9D, 9E Bull Run	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
10C Bull Run Variant	D	None	---	---	0.5-1.5	Perched	Nov-May	>60	---	Moderate	Moderate.
11 Gammas	A	Frequent	Brief	Nov-May	>6.0	---	---	>60	---	Moderate	Moderate.
X 12A, 12B Ganderly	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
13B, 13C, 13D, 13E, 14C, 14D, 14E Cascade	C	None	---	---	1.5-2.5	Perched	Dec-Apr	>60	---	High	Moderate.
15B, 15C, 15D Cazadero	C	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
16 Chehalis	B	Occasional	Brief	Nov-Mar	>6.0	---	---	>60	---	Moderate	Moderate
17, 18 Clackamas	D	None	---	---	0.5-1.5	Perched	Nov-May	>60	---	Moderate	Moderate
19 Cloquato	B	Occasional	Very brief	Nov-Mar	>6.0	---	---	>60	---	Moderate	Moderate
20 Coburg	C	None	---	---	1.5-2.5	Apparent	Nov-May	>60	---	Moderate	Moderate
21 Concord	D	None	---	---	+1.5-0.5	Apparent	Nov-May	>60	---	Moderate	Moderate
22 Conser	D	Rare	---	---	+1-1.5	Apparent	Nov-May	>60	---	Moderate	Moderate
23B, 23C, 23D Cornelius	C	None	---	---	2.5-4.0	Perched	Dec-Apr	>60	---	Moderate	Moderate

See footnote at end of table.

TABLE 13.--PHYSICAL AND CHEMICAL PROPERTIES OF SOILS

[The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated]

Soil name and map symbol	Depth In	Clay Pct	Moist bulk density G/cm ³	Permeability In/hr	Available water capacity In/in	Soil reaction pH	Shrink-swell potential	Erosion factors		Organic matter Pct
								K	T	
1A, 1B----- Aloha	0-8	15-20	1.35-1.55	0.6-2.0	0.19-0.21	5.6-6.0	Low-----	0.43	5	2-3
	8-35	18-27	1.40-1.55	0.2-0.6	0.19-0.21	5.6-6.5	Low-----	0.55		
	35-60	10-25	1.45-1.60	0.2-0.6	0.16-0.21	5.6-6.5	Low-----	0.55		
2B, 2C, 2D, 2E---- Alsbaugh	0-14	27-35	1.00-1.20	0.6-2.0	0.16-0.21	5.6-6.0	Moderate-----	0.24	5	5-7
	14-43	35-45	1.20-1.40	0.2-0.6	0.08-0.16	4.5-5.5	Moderate-----	0.24		
	43-60	35-45	1.10-1.30	0.2-0.6	0.06-0.10	4.5-5.5	Moderate-----	0.10		
3----- Amity	0-22	15-25	1.20-1.45	0.6-2.0	0.19-0.21	5.6-6.0	Low-----	0.32	5	3-5
	22-60	27-35	1.20-1.40	0.2-0.6	0.19-0.21	5.6-6.5	Moderate-----	0.49		
4E, 4F. Andic Cryaquepts	0-17	7-10	0.85-0.95	0.6-2.0	0.07-0.10	5.1-6.5	Low-----	0.10	5	7-12
	17-60	10-18	0.85-0.95	0.6-2.0	0.07-0.10	5.6-6.5	Low-----	0.10		
5D, 5E----- Aschoff	0-17	7-10	0.85-0.95	0.6-2.0	0.07-0.10	5.1-6.5	Low-----	0.10	5	7-12
	17-60	10-18	0.85-0.95	0.6-2.0	0.07-0.10	5.6-6.5	Low-----	0.10		
6F*: Aschoff-----	0-17	7-10	0.85-0.95	0.6-2.0	0.07-0.10	5.1-6.5	Low-----	0.10	5	7-12
	17-60	10-18	0.85-0.95	0.6-2.0	0.07-0.10	5.6-6.5	Low-----	0.10		
Brightwood-----	0-4	10-18	1.00-1.20	2.0-6.0	0.06-0.12	5.6-6.5	Low-----	0.10	2	4-8
	4-34	10-15	1.00-1.20	2.0-6.0	0.04-0.12	5.6-6.5	Low-----	0.10		
	34	---	---	---	---	---	---	---		
7B----- Borges	0-18	27-35	1.20-1.40	0.2-0.6	0.19-0.21	5.1-6.0	Moderate-----	0.32	5	2-4
	18-45	45-60	1.20-1.40	<0.06	0.15-0.17	5.6-6.0	High-----	0.32		
	45-60	27-45	1.30-1.40	0.2-0.6	0.12-0.21	5.6-6.0	Moderate-----	0.32		
8B, 8C, 8D----- Bornstedt	0-8	20-27	1.30-1.50	0.6-2.0	0.15-0.17	5.1-6.0	Low-----	0.32	5	3-4
	8-33	27-35	1.40-1.60	0.6-2.0	0.13-0.17	5.1-6.0	Low-----	0.37		
	33-60	40-50	1.30-1.50	0.06-0.2	0.12-0.15	4.5-5.5	Low-----	0.32		
9B, 9D, 9E----- Bull Run	0-19	12-20	0.70-0.75	0.6-2.0	0.18-0.24	5.1-6.0	Low-----	0.32	5	6-10
	19-60	12-18	0.70-0.85	0.6-2.0	0.24-0.26	5.1-6.0	Low-----	0.49		
10C----- Bull Run Variant	0-14	10-20	0.70-0.85	0.6-2.0	0.18-0.24	5.1-6.0	Low-----	0.28	5	6-8
	14-48	10-20	0.75-0.85	0.6-2.0	0.20-0.24	5.1-6.0	Low-----	0.43		
	48-60	30-45	1.00-1.40	0.2-0.6	0.19-0.21	5.1-6.0	Moderate-----	0.37		
11----- Gamias	0-17	5-10	1.30-1.50	2.0-6.0	0.07-0.09	5.6-7.3	Low-----	0.10	2	1-3
	17-60	0-5	1.40-1.60	>20	0.03-0.05	5.6-6.5	Low-----	0.10		
12A, 12B----- Ganderly	0-7	10-18	1.00-1.20	2.0-6.0	0.11-0.13	5.6-6.5	Low-----	0.10	5	4-6
	7-46	10-18	1.00-1.20	2.0-6.0	0.11-0.13	5.6-6.5	Low-----	0.10		
	46-60	5-10	1.10-1.30	2.0-6.0	0.04-0.08	5.6-6.5	Low-----	0.17		
13B, 13C, 13D, 13E----- Cascade	0-11	15-19	1.10-1.20	0.6-2.0	0.17-0.21	5.1-6.0	Low-----	0.24	5	4-7
	11-21	18-30	1.30-1.40	0.6-2.0	0.17-0.21	5.1-6.0	Low-----	0.28		
	21-60	17-28	1.40-1.55	0.06-0.2	0.03-0.05	5.1-6.0	Low-----	0.20		
14C, 14D, 14E----- Cascade	0-24	18-25	1.20-1.30	0.6-2.0	0.17-0.21	5.1-6.0	Low-----	0.24	5	4-6
	24-32	20-30	1.60-1.85	0.06-0.2	0.03-0.05	5.1-6.0	Low-----	0.20		
	32-60	27-40	1.20-1.40	0.2-0.6	0.11-0.15	5.1-6.0	Moderate-----	0.10		
15B, 15C, 15D----- Cazadero	0-21	25-40	1.20-1.40	0.6-2.0	0.15-0.17	5.1-6.0	Low-----	0.24	5	3-4
	21-60	45-60	1.30-1.50	0.2-0.6	0.11-0.13	5.1-6.0	Moderate-----	0.28		
16----- Chehalis	0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.21	5.6-6.5	Low-----	0.32	5	5-10
	7-44	25-35	1.20-1.30	0.6-2.0	0.17-0.21	5.6-7.3	Moderate-----	0.28		
	44-60	15-35	1.10-1.30	0.6-2.0	0.17-0.21	5.6-7.3	Moderate-----	0.28		

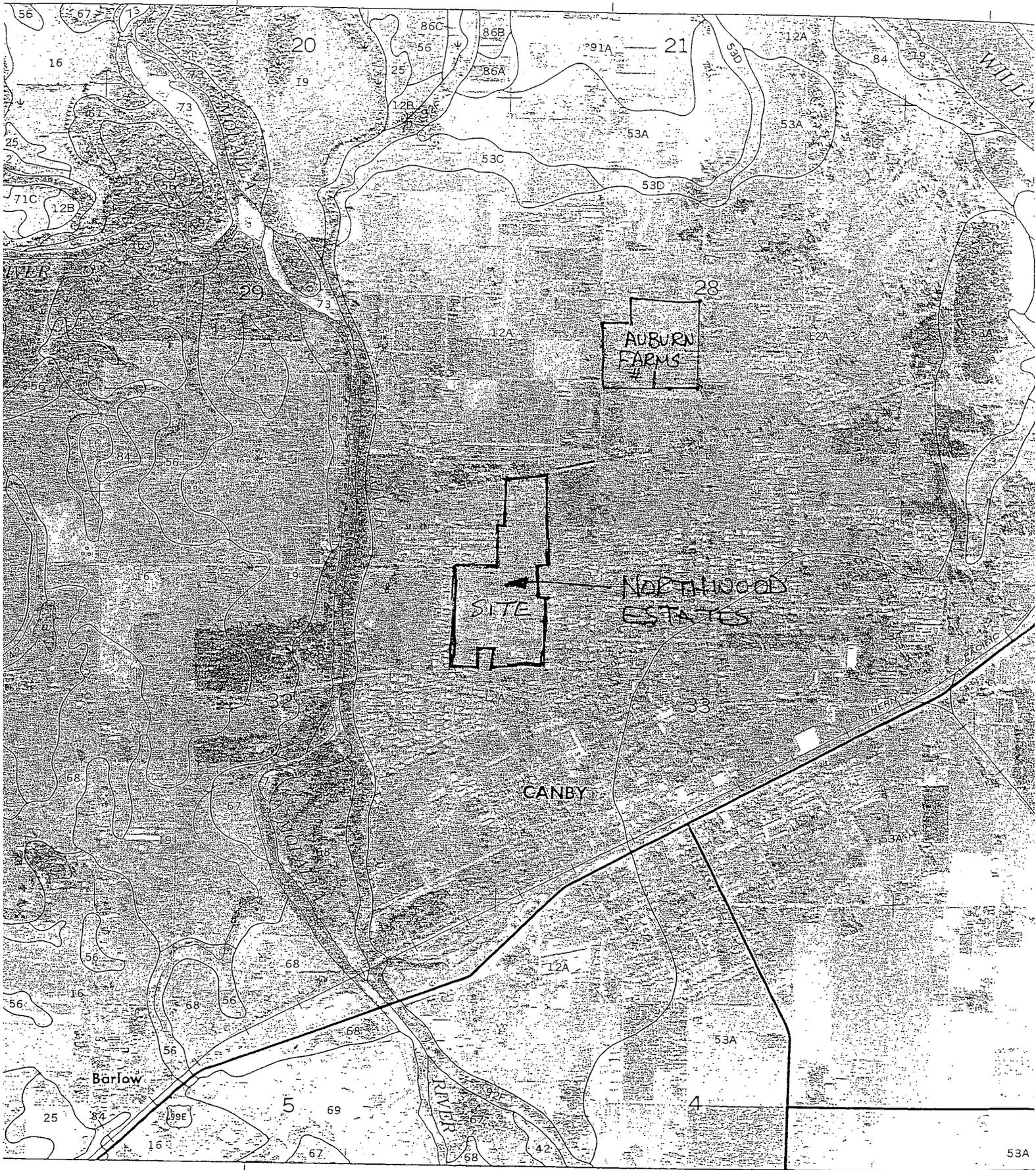
See footnote at end of table.

TABLE 3.5.2B SCS WESTERN WASHINGTON RUNOFF CURVE NUMBERS

SCS WESTERN WASHINGTON RUNOFF CURVE NUMBERS (Published by SCS in 1982)					
Runoff curve numbers for selected agricultural, suburban and urban land use for Type 1A rainfall distribution, 24-hour storm duration.					
LAND USE DESCRIPTION	CURVE NUMBERS BY HYDROLOGIC SOIL GROUP				
	A	B	C	D	
Cultivated land(1): winter condition	86	91	94	95	
Mountain open areas: low growing brush and grasslands	74	82	89	92	
Meadow or pasture:	65	78	85	89	
Wood or forest land: undisturbed or older second growth	42	64	76	81	
Wood or forest land: young second growth or brush	55	72	81	86	
Orchard: with cover crop	81	88	92	94	
Open spaces, lawns, parks, golf courses, cemeteries, landscaping. good condition: grass cover on 75% or more of the area	68	80	86	90	
	fair condition: grass cover on 50% to 75% of the area	77	85	90	92
Gravel roads and parking lots Dirt roads and parking lots	76	85	89	91	
	72	82	87	89	
Impervious surfaces, pavement, roofs, etc.	98	98	98	98	
Open water bodies: lakes, wetlands, ponds, etc.	100	100	100	100	
Single-Family Residential (2)	Separate curve number shall be selected for pervious and impervious portion of the site or basin				
Dwelling Unit/Gross Acre					% Impervious (3)
1.0 DU/GA					15
1.5 DU/GA					20
2.0 DU/GA					25
2.5 DU/GA					30
3.0 DU/GA					34
3.5 DU/GA					38
4.0 DU/GA					42
4.5 DU/GA					46
5.0 DU/GA					48
5.5 DU/GA					50
6.0 DU/GA					52
6.5 DU/GA					54
7.0 DU/GA					56
Planned unit developments, condominiums, apartments, commercial business and industrial areas.	% impervious must be computed				

- (1) For a more detailed description of agricultural land use curve numbers refer to National Engineering Handbook, Section 4, Hydrology, Chapter 9, August 1972.
- (2) Assumes roof and driveway runoff is directed into street/storm system.
- (3) The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.





04-072 Δ



9120 SW Pioneer Court, Suite B • Wilsonville, Oregon 97070 503/662-1980 FAX: 503 / 662-2753

March 17, 2006
Project No. 1504.4.1

Centex Homes
16520 SW Upper Boones Ferry Road, Suite 200
Portland, Oregon 97224

Attention: Ms. Kati Sprague

Subject: Infiltration Testing
Phase 1 Drywell Location
Auburn Farms Subdivision
Canby, Oregon

Dear Ms. Sprague:

As requested, Northwest Geotech, Inc., (NGI) has completed an exploratory boring and infiltration testing at the proposed drywell location on Phase 1 of the subject project.

The boring was drilled to a depth of 30 feet at the location of the proposed intersection of 19th Avenue and Lupine Street (approximate station 5+00) using continuous flight hollow stem auger drilling equipment. The boring was logged by a geologist from our office who visually classified the subsurface soils in accordance with the Unified Soil Classification System (USCS). A detailed log of the boring is attached.

The infiltration test was conducted by introducing water into the borehole using the hollow stem auger as casing. The soils were allowed to presoak prior to measurement of the infiltration rate. Following the presoak the infiltration rate was measured over 20 minute periods. The infiltration measurements are summarized below.

Infiltration Test Results		
Trial	Measured Infiltration Rate (inches/hour)	Average Infiltration Rate (inches/hour)
1	36.0	44
2	53.1	
3	43.5	
4	43.5	

For design purposes a minimum factor of safety of 2.0 is recommended to be applied to the measured infiltration rate to account for loss of efficiency over time due to siltation and biologic growth.

This opportunity to be of service is sincerely appreciated. If you should have any questions, please contact our office.

Respectfully submitted,

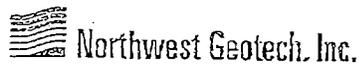
NORTHWEST GEOTECH, INC.

Wayne R. Olsen, P.E.
Project Engineer

Copies: (1) Addressee (E-mail and U.S. mail)
(1) Mr. Pat Sisul, Sisul Engineering (E-mail only)

Docs:1504-41 Infiltration 03-17-06.doc/BJH

DRILLING COMPANY : WESTERN STATES			RIG : CME-75		DATE : 3/13/06	
BORING DIAMETER : 8 in.		DRIVE WEIGHT : 140 lbs.		DROP : 30 in. ELEVATION :		
DEPTH (FEET)	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-1	
0					ASPHALTIC CONCRETE SURFACE OVER CRUSHED AGGREGATE BASE	
				SM	BROWN, MOIST, LOOSE, SILTY SAND	
5	8					
				SP-SM	BROWN, MOIST, LOOSE, SLIGHTLY SILTY TO SILTY, MEDIUM TO FINE SAND	
10	7					
15	28					
20	70-5"			GM	BROWN, VERY WET, VERY DENSE, SILTY, SANDY GRAVEL WITH COBBLES	
25	76				BECOMES MOIST	
30						
BORING LOG						
PROJECT NO. 1504.4.2		CENTEX HOMES AUBURN FARMS SUBDIVISION - PHASE 1 CANBY, OREGON			FIGURE NO. A-1	



DRILLING COMPANY : WESTERN STATES			RIG : CME-75		DATE : 3/13/06	
BORING DIAMETER : 8 in.			DRIVE WEIGHT : 140 lbs.		DROP : 30 in. ELEVATION :	
DEPTH (FEET)	DRIVE SAMPLE BLOWS/FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS (U.S.C.S.)	SOIL DESCRIPTION BORING NO. B-1(CONT.)	
30	70-5			GM	BROWN, VERY WET, VERY DENSE, SILTY, SANDY GRAVEL WITH COBBLES	
35					TOTAL DEPTH: 30.5 FEET NO GROUNDWATER ENCOUNTERED	
40						
45						
50						
55						
60						
BORING LOG						
PROJECT NO. 1504.4.2			CENTEX HOMES AUBURN FARMS SUBDIVISION - PHASE 1 CANBY, OREGON			FIGURE NO. A-2





Oregon

Theodore R. Kulongoski, Governor

Department of Environmental Quality

811 SW Sixth Avenue

Portland, OR 97204-1390

503-229-5696

TTY 503-229-6993

February 16, 2007

Mr. Kevin Cook
City of Canby
1120 NW 12th Avenue
Canby, Oregon 97013

UIC Registration for: Northwood Estates in Canby

Dear Mr. Cook:

Thank you for submitting a registration form for the Underground Injection Control (UIC) system at your facility. Upon review, the city is considered to be a large owner by category. The city needs develop and submit a city wide monitoring plan with annual monitoring to start at the onset of winter rainfall. Copies of the monitoring results should be sent in to DEQ annually each July provided the sampling is below the Safe Drinking Water Act Maximum contaminant levels and meets the requirements for groundwater under Division 40. If elevated levels are found in sampling you must take action to 1) notify DEQ, and 2) begin quarterly monitoring while modifying the system (e.g. add more source controls etc) to bring it into compliance.

The following table shows your UIC identification number combined with the injection system information you submitted. Generally, each facility is issued one UIC number; the various injection systems at that facility are then identified sequentially -1, -2, -3, etc. Please reference this number in future correspondence and retain this letter, or a copy of it, on site should your facility be inspected.

UIC #	Type Code	Status	Location
10343-307	5D2 (storm water)	New/Sediment Manhole	ROW N Elm/NW Territorial
10343-308	5D2	New/Sediment Manhole	ROW NW 14th
10343-309	5D2	New/Sediment Manhole	ROW NW 13th
10343-310	5D2	New/Sediment Manhole	ROW N Fir Street (lot 29/circle)
10343-311	5D2	New/Sediment Manhole	ROW N Fir Street (lot 28)
10343-312	5D2	New/Sediment Manhole	ROW N Fir Street (lot 25 at curve)
10343-313	5D2	New/Sediment Manhole	ROW N Fir Street above circle
10343-314	5D2	New/Sediment Manhole	ROW NW 12 th /N Elm
10343-315	5D2	New/Sediment Manhole	ROW N Elm/ NW 11th
10343-316	5D2	New/Sediment Manhole	ROW N Elm/ by open space
10343-317	5D2	New/Sediment Manhole	ROW N Elm past NW 11th
10343-318	5D2	New/Sediment Manhole	ROW NW 11th/N Douglas (e)
10343-319	5D2	New/Sediment Manhole	ROW NW 11 th / N Douglas (w)
10343-320	5D2	New/bioswale & trenchdrain	ROW NW 10 th N past N Elm
10343-321	5D2	New/bioswale & trenchdrain	ROW NW 10 th S past N Elm
10343-322	5D2	New/bioswale & trenchdrain	ROW NW 10 th N before N. Elm

10343-323	5D2	New/bioswale & trenchdrain ROW NW 10 th S before N. Elm
10343-324	5D2	New/bioswale & trenchdrain ROW NW 10 th N past N. Douglas
10343-325	5D2	New/bioswale & trenchdrain ROW NW 10 th S past N. Douglas

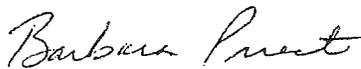
Please note that you are required to do the following:

- Update registration information whenever a change of ownership, change of land use, abandonment or closure of your injection system takes place.
- Maintain and operate each catch basin and injection system to provide protection of groundwater resources per your storm water plan. This includes following the maintenance schedule and providing employee education. Failure to do so could jeopardize rule authorized status.
- Failure to install the pre-treatment system(s) noted in above from the modified application form (from later negotiation) with DEQ, in front of each injection system will jeopardize rule authorized status. Install the injection systems and all treatment within 90 days after the injection system becomes operational or the site will lose its rule authorized status and need to apply for a state permit or be closed.
- This authorization is for storm water only. It does not include runoff or leakage from a dumpster, waste or material storage areas or from construction activities, wash water, process water, fueling areas or waste water discharges.
- Rule authorization will be revoked and a permit required if this site is found to be inside the delineated 2 year Time of Travel for a municipal well or within 500 ft of a water supply well.

In the event a substance is spilled which may contaminate groundwater, contact the closest DEQ regional office and ask for the duty officer at the Northwest Region office: (503) 229-5263 and call Oregon Emergency Management at (503) 378-6377 or (800) 452-0311.

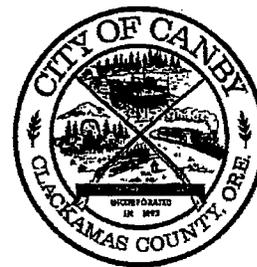
Based on the information you have sent to DEQ, your injection system has qualified as rule authorized under OAR 340-44. Please check with your local government to see if they have additional requirements. If you have any questions about this letter, please contact me at (503) 229-5945, or toll free inside Oregon at 1-800-452-4011.

Sincerely,



Barbara Priest, UIC Program Coordinator
Water Quality Division

Cc; Neil Mullane, DEQ-NWR
Gordon Monroe, Kennedy Jenks
Curt McCloud, Curran-McLeod



**BEFORE THE PLANNING COMMISSION
OF THE
CITY OF CANBY**

**A REQUEST FOR APPROVAL OF)
PHASE I FOR A SUBDIVISION)
OF EIGHT EXISTING PARCELS)
TOTALING 31.57 ACRES INTO 110)
RESIDENTIAL BUILDING LOTS)**

**FINDINGS, CONCLUSIONS
& FINAL ORDER
SUB 05-12
(Northwood Estates)**

NATURE OF APPLICATION

The applicants are proposing a 41 lot subdivision (Phase I) on land that will ultimately be built-out to 110 lots (four phases total). While the current subdivision request is for Phase I there is an underlying requirement for a master-plan over the entire area. Because the applicant's request for Phase I requires a master-plan, the applicants have submitted detailed plans that encompass all four phases. A condition of approval for this request requires the recordation of a Development Agreement to be signed by the City and the owners of the subject properties. The applicants believe that applications for the remaining three phases will occur over a three year period; therefore the Development Agreement shall be valid for a period of three years from the date of recordation. If the applicants require more than the proposed three year time frame, the Development Agreement includes a provision for an unlimited number of extensions of time not to exceed one-year apiece and subject to review and approval by the Planning Commission per each extension request. The Canby Comprehensive Plan (Areas of Special Concern, Area L) requires master-planning for the area. The specific language in the Comprehensive Plan for area L is as follows:

"Area "L" comprises approximately 30 acres of parcels zoned for low density residential development. The parcels have been farmed for many years and were outside the Urban Growth Boundary of the City until 2003. The area presents a unique challenge because it is surrounded by existing neighborhoods that could be negatively impacted by development. In addition, the City has infrastructure requirements that must be developed following a comprehensive master plan addressing parks and/or open space provision, street and infrastructure design, public safety facilities, buffering, and other relevant issues. The master plan should integrate reasonable foreseeable uses of adjacent properties. Subdivision of the property should not occur unless such a master plan is approved by the

**Findings, Conclusion and Final Order
SUB 05-12
Page 1 of 10**

Planning Commission. Creation of the master plan should include input from the public and neighborhood association."

The applicants will be required to file a separate subdivision application for each subdivision phase; this process will ensure compliance with the adopted Development Agreement and original conditions of approval.

The eight properties covered by the development total 31.57 acres. Phase I will be 12.78 acres, 10.30 acres for Phase II, 5.04 acres for Phase III, and 3.45 acres for Phase IV. A dominant feature of the development is a linear public park to be dedicated to the City. The larger, northern portion of the park (1.47 acres) is included as part of Phase I. The narrower southern portion (0.85 acres) is incorporated into a boulevard within N. Elm Street. At the southern terminus of the park there is 2700 square feet of Home Owner Association (HOA) maintained land, which is to incorporate a water feature. The park is being offered as a donation to the City. The Parks Department has offered to waive the future Parks System Development Charge for new lots in the development in order to help offset the cost of development of the park; this arrangement is detailed in the Development Agreement.

Proposed lot 21 will contain an existing single family residence and several existing trees. The average lot size over the entire development will be 8,456 square feet and 9,001 square feet for Phase I. Lot sizes over the entire development ranges from 7,000 square feet to 15,840 square feet. The applicant proposes to utilize lot size averaging in order to allow a total of 9 lots to be greater than 10,000 square feet in size. The applicants have proposed that certain lots along the exterior of the development be height restricted (in addition to those lots that are identified as infill) through CC&Rs; this is in response neighborhood concerns.

This application meets the zoning and comprehensive plan designations of the R-1 Low Density Residential zone and satisfies the requirements of the Comprehensive Plan, Areas of Special Concern.

HEARINGS

The Planning Commission held a public hearing to consider this application on March 13, 2006.

CRITERIA AND STANDARDS

A. SUBDIVISION - City of Canby Code Section 16.62.020

This is a quasi-judicial land use application. Applications for a subdivision shall be evaluated based upon the following standards and criteria:

1. Conformance with the text and applicable maps of the Comprehensive Plan.
2. Conformance with other applicable requirements of the land development and planning ordinance.

3. The overall design and arrangement of lots shall be functional and shall adequately provide building sites, utility easements, and access facilities deemed necessary for the development of the subject property without unduly hindering the use or development of adjacent properties.
4. It must be demonstrated that all required public facilities and services are available, or will become available through the development, to adequately meet the needs of the proposed land division.

FINDINGS AND REASONS

The Planning Commission deliberated on all testimony presented at the March 13, 2006 public hearing, and includes the March 6, 2006 staff report. The Planning Commission accepts the findings in the March 6, 2006 staff report insofar as they do not conflict with the following additional considerations:

1. The Planning Commission added and/or modified several conditions of approval which are highlighted in red below.

CONCLUSION

Based on the March 6, 2006 staff report, public testimony received at the March 13, 2006 public hearing and Commission deliberation, the Planning Commission concludes that:

1. The partition request, with appropriate conditions, is considered to be in conformance with the Comprehensive Plan;
2. The partition request is in conformance with the applicable requirements of the Municipal Code regarding access to the site and hindrance of developing adjacent parcels;
3. The overall design and arrangement of lots will be functional and will adequately provide building sites, utility easements, and access facilities deemed necessary for the development of the subject property without unduly hindering the use or development of adjacent properties.
4. Necessary public services are available or will become available through the development of the property to adequately meet the needs of the proposed partition.

ORDER

IT IS ORDERED by the Planning Commission of the City of Canby that **SUB 05-12** is **APPROVED** subject to the following conditions:

1. Prior to signing of the final plat for Phase 1 of the subdivision, the applicant shall have a development agreement, legally binding upon present and future owners, recorded with the property which stipulates the following:

Staff Report
SUB 05-12
Page 3 of 10

(1) The design of Phase 1 and all future phases (i.e., the entire master plan) of this subdivision is binding as submitted in all details except as modified by the City as noted in the conditions of approval for SUB 05-12. No modifications to this approved plan may be made except as approved by the City of Canby.

For the Final Plat:

2. The final plat shall reference the following land use application: City of Canby, File No. SUB 05-12 and shall be registered with the Clackamas County Surveyor's Office and recorded with the Clackamas County Clerk's Office. Evidence of this shall be provided to the City of Canby Planning Department prior to the issuance of building permits.
3. The final plat mylars must contain, in the form specified, all information necessary to satisfy all matters of concern to the County Surveyor, or his authorized Deputy, including, but not necessarily limited to, various matters related to land surveying, land title, plat security, and plat recordation.
4. Easements shall be provided as follows:
 - Twelve (12) foot wide public utility and tree planting easements along all street frontages.
 - Looping waterlines and associated easements shall be required on proposed lots 21 and 22, and on lots 34 and Tract A. The precise locations of the easements shall be coordinated with the Canby Utility Board and shall be determined prior to the signing of the final plat.
 - All lots that show access easements on the approved site plan shall show said easements on the final plat; **said easements shall be recorded prior to the issuance of a building permit.**
5. The well lot (Tract D) shall include a deed restriction indicating that it shall be not be used for residential purposes for as long as the well is in use. Should the well be abandoned the lot may remain as open space or may be reabsorbed by lot 28.

Prior to the signing of the Final Plat:

6. The land divider shall follow the provisions of Section 16.64.070 Improvements, in particular, but not limited to, subparagraph (O) Bonds, which requires a surety bond, personal bond, or cash bond for subdivision improvements for any improvement not completed prior to the signing of the final plat. The bond shall provide for the City to complete the required improvements and recover the full cost of the improvements.
7. A copy of the CC&Rs that will be filed with the subdivision shall be submitted to the City Planning Department, prior to the signing of the final plat, and shall include a statement that street trees will be planted along street frontages, within the street tree

planting easement. The CC&Rs must also include a statement notifying home owners of their responsibilities under the current Tree Ordinance for maintenance of street trees. The CC&Rs must also include, at a minimum, the following:

- Land which is not intended for physical development, such as building or street uses, is required to remain in open space usage perpetually. Maintenance of such open space areas shall remain the responsibility of the individual owner or owners' association, in a manner outlined in the by-laws of such association.
 - The manner in which any open space, private park and recreational area, and parking areas are to be maintained shall be presented along with the preliminary copy of the proposed owners' association by-laws and contractual agreements shall be submitted with the preliminary subdivision.
8. A contract between the developer and a certified landscape contractor must be approved by the City prior to the signing of the final plat. The contract must include a street tree and planter strip planting plan (as appropriate) with the types and locations of trees to be planted and timing of the planting. The landscape contractor must be licensed in all phases of landscape contracting by the Oregon Landscapers Contractors Board.

Prior to construction:

9. The design, location, and planned installation of all utilities, including but not limited to water, electric, sanitary sewer, natural gas, telephone, and cable television shall be approved by the appropriate utility provider. Final approval of site and utility plans is required prior to the issuance of any building permit. To facilitate this, twelve (12) copies of pre-construction plans shall be given to the City to be reviewed and approved by the Canby Utility Board, the Canby Telephone Association, the City, and other required utility providers prior to the pre-construction conference. The construction plans shall include the street design, storm water, sewer, water, electric, telephone, gas, street lights, mail boxes and street trees. Utilities shall be separated from one unit to the next.
10. The following design parameters shall be met:
- The minimum street width for local streets shall be 28 feet where parking is limited to one street side, otherwise the width shall be 36 feet wide.
 - 20 foot street width is approved for the one-way sections of N. Elm Street as shown on the approved site plan.
 - The minimum curb radius for cul-de-sacs shall be 48-feet to facilitate maintenance vehicles per IFC standards.
 - The "K" values for vertical curves shall meet AASHTO requirements.
11. Where applicable, newly constructed residences shall comply with Infill Home Standards through the building permit approval process. On lots bordering

existing homes the building permit application shall include the distances from lot lines to neighboring residences as well as existing heights of the neighboring buildings. All perimeter lots marked with an asterisk (*) on applicant's site plan (labeled 2 of 10) shall be restricted in height as proposed by the applicant.

12. Lots 51, 52, 53, 54, and 55 shall have fire sprinklers installed per IFC and IBC standards.
13. The building plans for the following lots shall show front yard and dwelling orientation towards N Elm St: Lots 8, 9, 39, 44, 45, 46, 47, 48, 49, 62, 63, 64, 65, 66, and 67.
14. The following access restrictions shall apply to certain lots: No lot fronting NW Territorial Road shall have direct access to NW Territorial Road. Lots 9 and 39 shall access NW 13th Avenue only. Lots 45, 47, 48 and 62 shall access 12th Avenue only. Lots 63 and 64 shall access 11th Avenue only. Lots 57 and 67 shall access 10th Avenue only. Lots 56 and 57 shall access the cul-de-sac labeled "B" street only. Lot 15 shall access NW 14th Avenue only.
15. Private water lines (irrigation) will not be allowed to be constructed in the public right-of-way. Private water lines may cross streets if they are in casings.
16. The proposed 10-inch pipe to be extended on NW Territorial Road should be constructed at minimum grade in order to facilitate sanitary sewer service to the west. This is in accordance with the Wastewater Collection system master Plan.
17. Access to the sanitary sewer line between lots 24 and 25 shall be maintained and a sewer easement of 5 feet along each side of the common boundary between lots 24 and 25 shall be maintained.
18. The sanitary sewer shown in an easement crossing lot 67 on the site plan shall be located in the street or as required by the Public Works supervisor.
19. The end of the sanitary sewer lines on NW 12th Avenue and N Douglas Street shall have manholes to facilitate maintenance of the system.
20. Subsurface evaluations in the vicinity of the proposed drainage improvements shall be conducted by a licensed hydrologist, soil scientist, geologist, or engineer.
21. Bioswales and infiltration trenches shall be designed according to the design guidelines developed by the City of Portland and presented in the Stormwater Management Manual.
22. The sanitary sewer shall be extended to the phase line and a temporary clean out installed. This shall be done for each phase in order to facilitate the subsequent phase of the development.
23. The phasing of the water system shall be coordinated with the Canby Utility Board.

24. A drainage master plan for all four phases shall be submitted to the City for review and approval prior to the approval of subsequent subdivision requests for the remaining 3 phases.

As part of construction:

25. Street lighting shall be provided and shall meet City street lighting standards. Installation of street lights to be reviewed and approved by the City and the Canby Utility Board.

26. Improvements to the park area including lighting fixtures for City Park area to be reviewed and approved by the Canby Parks Department.

27. An erosion control permit is required. All City erosion control regulations shall be followed during construction as specified by the Canby Municipal Code.

28. The applicant shall construct an approved curb cut and approach apron at the drive entrance to each parcel. Access improvements and sidewalks and paving shall be inspected and approved by Canby Public Works prior to installation.

29. Prior to issuance of a certificate of occupancy on individual lots, five (5) foot sidewalks inclusive of curb shall be constructed along all street frontages. Where mailboxes, fire hydrants or other obstructions must be located at the curb, sidewalks shall swing away from the curb such that the walkway remains unobstructed for a full five-foot width. Sidewalks shall as shown on the approved site plans.

30. No parking signs and/or painted curbs indicating no parking shall be placed in front of all areas not intended for parking on the approved site plan.

31. Half street improvements are required along the south side of N.W. Territorial Road. The half street improvements shall be constructed along the development's frontage with NW Territorial Road. The offsite half street improvements along the south side of NW Territorial Road east to N Hawthorne Street may be accomplished by one of the following:

1. A City initiated Local Improvement District (LID) with assessments to the benefited property.

2. A separate agreement with the Northwood Investment Partnership and the City for reimbursement of improvement costs through a reduction in the Systems Development Charge.

3. Any mutually agreed upon arrangement for reimbursement to the Developer for the offsite improvements.

Street improvements shall be constructed to City standards, shall include 5-foot sidewalk, and shall be approved by the City Contract Engineer, Canby Public Works, and the Clackamas County Transportation Division prior to construction. The improved pavement width on NW Territorial Road shall be to the centerline of the road at a minimum. The north side of the road shall have a minimum of a 10-foot travel lane.

32. For NW 10th Avenue the curves on the bump-outs must be designed to facilitate street

sweeping.

33. Per the Transportation System Plan shared bike lanes (not striped) are required on NW 10th Avenue and NW Territorial Road.

After construction:

34. "As-built" drawings of all public improvements shall be submitted to the City within sixty (60) days of completion. A copy of the "as-built" drawings shall be submitted on a computer disk in an AutoCAD format.

Notes:

35. The final plats must be submitted to the City within one (1) year of the approval of the preliminary plat according to Section 16.68.020.
36. The approval of this subdivision application will be null and void if the final plat is not submitted to the County within six (6) months after signing of the plat by the City (Section 16.68.070).
37. Any relocation of existing utilities required due to construction of the development shall be done at the expense of the applicant.
38. Sanitary system and storm drainage plans shall be approved by DEQ prior to construction.
39. The site approval as acted upon by the Commission shall be binding upon the developer and variations from the plan shall be subject to approval by the Commission.
40. The streets labeled A and B on the applicant's site plan shall be named in accordance with City street naming standards.

I CERTIFY THAT THIS ORDER approving **SUB 05-12** was presented to and **APPROVED** by the Planning Commission of the City of Canby.

DATED this 27th day of March, 2006.



James R. Brown, Chair
Canby Planning Commission



Kevin C. Cook
Associate Planner

ATTEST:

ORAL DECISION – March 13, 2006

AYES: Brown, Ewert, Manley, Molamphy

NOES: None

ABSTAIN: Helbling

ABSENT: None

WRITTEN DECISION – March 27, 2006

AYES: Brown, Ewert, Molamphy

NOES: None

ABSTAIN: Tessman

ABSENT: Manley, Helbling

ATTACHMENT 774

**NORTHWOOD ESTATES
DEVELOPMENT AGREEMENT**

Clackamas County Official Records
Sherry Hall, County Clerk

2007-007387

After recording return to:



\$76.00

01065046200700073870110113

01/26/2007 03:38:12 PM

Northwood Investments,
Attn: Mr. Ron Tatone, Partner
1127 NW 12th Avenue
Canby, OR 97013

D-DEVA Cnt=1 Stn=2 TIFFANYCLA
\$55.00 \$11.00 \$10.00

Witness my hand and seal of County
affixed.

Name	Title
By: _____	Deputy.

THIS AGREEMENT is made as of the 11 day of Jan., 2007, by and between the City of Canby, Oregon, with a mailing address of 182 North Holly Street, Canby, Oregon 97013, (the "City") and Northwood Investment Partnership together with Archie & Lois McLeod (the "Applicant"). NOW THEREFORE, the parties agree as follows:

I. AFFECTED PROPERTY

This Agreement shall be recorded upon the deed of that tract of land conveyed in 1990 to Northwood Investments, a general partnership consisting of Ronald G. Tatone, Lynn Kadwell, Curt McLeod, Fred Kahut and Bresco, Inc. as recorded in Deed Number 90-20689, Clackamas County Records and attached herein as Exhibit "A"; and additionally that tract of land conveyed to 2KRMT, INC. as recorded in Deed Number 2006-070258, Clackamas County Records and attached herein as Exhibit "B".

II. MASTER PLAN

The design of Phase 1 and all future phases of the Northwood Estates master plan is binding as submitted by the Applicant (Exhibit 1) in all details except as modified by the City as noted in the Findings of Fact and Conclusions of Law for City file SUB 05-12 (Exhibit 3). No modifications to this approved plan may be made except as approved by the City. The Agreement shall be considered valid for a period of one-thousand-ninety-five (1095) days to commence upon the date of recordation. If this Agreement expires prior to the City approval of the subdivision application for any particular phase, the Applicant shall be required to apply for master plan approval prior to the approval of any remaining phases. Agreement may be extended and/or modified only upon approval by the City. Each extension request may be granted for a period of three-hundred-sixty-five (365) days beyond the expiration date; upon approval by the City. This Agreement shall not conflict with the current Canby Municipal Code, Comprehensive Plan, or any other relevant laws and/or regulations in effect at the time of development.

III. PARK DEDICATION

The City has not required the dedication of any park land; however, the Applicant has offered to donate 2.94 acres of gross area that will result in a 2.32 acres of park land in the manner described in Section IV of this Agreement and as shown in Exhibit 2. Dedications shall occur as provided in Section V of this Agreement. Upon dedication, the dedicated park land shall be wholly City owned and maintained for the benefit and use of the public. The park land shall be developed by the Applicant at the Applicant's expense. The Applicant shall provide, at a minimum, street improvements, curbs, sidewalks or walkways, grass surfacing, street trees, irrigation system, and lighting. All park improvements shall be subject to review and approval by the City Parks Department. Any park improvements not completed at the time of the signing of the subdivision plat shall be subject to the bonding requirements listed under Section 16.64.070 of the Canby Municipal Code.

IV. PARK SDC CREDIT

The City agrees to waive future System Development Charges (SDCs) for all phases of development, that are normally charged by the City Parks Department upon the issuance of a building permit to offset an equivalent portion of the value of dedication and cost of development of the park improvements. The value of any additional park dedication or development-cost beyond that being offset is offered as a free will donation from the applicant to the City. The waiver only applies to future building permits issued within the boundaries of the properties covered by this Agreement (110 single family residences). The waiver shall only apply to the parks SDC; all other SDCs in effect at the time of the issuance of individual permits shall remain valid.

V. PHASING

The master plan shall be developed in four phases as shown in Exhibit 2. Each phase shall be subject to separate Subdivision applications as required by the City. The Applicant agrees to adhere to all conditions of approval required as part of each subdivision approval.

For all Phases:

Subsurface evaluations in the vicinity of the proposed drainage improvements shall be conducted by a licensed hydrologist, soil scientist, geologist, or engineer at the Applicant's expense. Bioswales and infiltration trenches shall be designed according to the design guidelines developed by the City of Portland and presented in the Stormwater Management Manual. The sanitary sewer shall be extended by the Applicant to the phase line and a temporary clean out shall be installed; this shall be done for each phase in order to facilitate each subsequent phase of the development. The phasing of the water system shall be coordinated with the Canby Utility Board. The Applicant shall provide a drainage master plan for the entire development prior to the signing of the final subdivision plat for Phase I. Any relocation of existing utilities required due to construction of the development shall be done at the expense of the Applicant.

Phase I:

Phase I shall include the dedication of Tract A (1.82 acres of gross area resulting in a net 1.47 acres of park land) to be donated to the City at the time of the signing of the final subdivision plat. The well lot (Tract D) shall include a deed restriction indicating that it shall be not be used for residential purposes for as long as the well is in use. Should the well be abandoned, the lot may remain as open space or may be reabsorbed by lot 28. Lots 11, 25, 28, 29 and 41 shall be

subject to the same limitations of infill lots per the CMC. Private water lines (for irrigation) will not be allowed to be constructed within any public right-of-way except for street crossings provided the lines will be enclosed within casings; such crossings shall be subject to review and approval by the City.

Phase II:

Phase II shall include the dedication of Tract B (1.12 acres of gross area resulting in a net 0.85 acres of park land) to be donated to the City at the time of the signing of the final subdivision plat. The subdivision application for Phase II shall require a traffic study that shall address, at a minimum, the design of the proposed boulevard as it may relate to any vehicle conflicts particularly at the southern terminus. Lots 42, 59, 60, and 74 shall be subject to the same limitations of infill lots per the CMC.

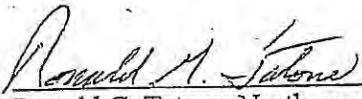
Phase III:

The subdivision application for Phase III shall require a traffic study that shall address, at a minimum, internal circulation. The traffic study for Phase III may be combined with a traffic study for either Phase II or Phase IV. Lots 75, 87, 88, 89, 90, 91, 92, 93, and 94 shall be limited to one story (22 feet) in height.

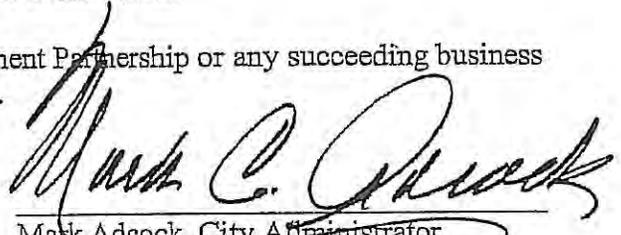
Phase IV:

The subdivision application for Phase IV shall require a traffic study that shall address, at a minimum, internal circulation and future external street connections.

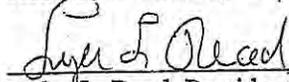
This agreement shall be binding upon the Northwood Investment Partnership or any succeeding business entity created for the development of the subject tract of land.



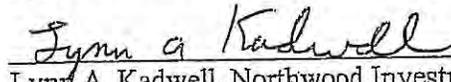
Ronald G. Tatone, Northwood Investments



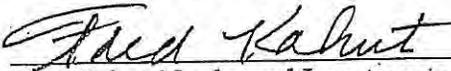
Mark Adcock, City Administrator



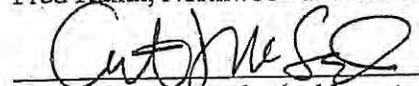
Lyle L. Read, President Bresco Inc,



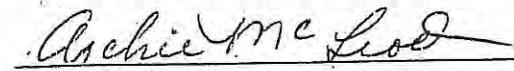
Lynn A. Kadwell, Northwood Investment



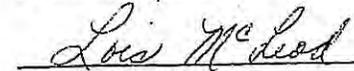
Fred Kahut, Northwood Investments



Curt McLeod, Northwood Investments



Archie McLeod



Lois McLeod

*Development Agreement is Subject to review by the Canby Planning Commission and City Attorney.

Exhibits incorporated by reference:

1. Applicant's Packet.
2. Master-Plan Map.
3. Findings of Fact and Conclusions of Law for City file SUB 05-12.

Attached Exhibits:

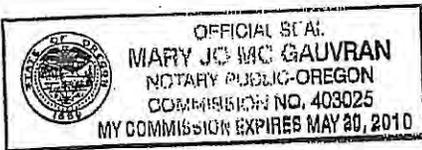
- Exhibit "A" Legal Description from Fee Number 90-20689
- Exhibit "B" Legal Description from Fee Number 2006-070258

State of Oregon, County of Clackamas:

Personally appeared the above named Ronald G. Tatone before me on Jan 11, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10



State of Oregon, County of Clackamas:

Personally appeared the above named Lyle L. Read, President, Bresco Inc., before me on 1-12, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 1-25-2010

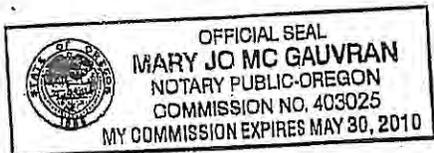


State of Oregon, County of Clackamas:

Personally appeared the above named Lynn A. Kadwell before me on Jan 11, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10



State of Oregon, County of Clackamas:

Personally appeared the above named Fred Kahut before me on Jan 11, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10



State of Oregon, County of Clackamas:

Personally appeared the above named Curt McLeod before me on Jan. 11, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10

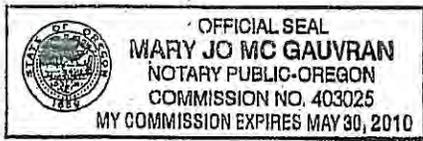


State of Oregon, County of Clackamas:

Personally appeared the above named Archie McLeod before me on Jan 19, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10

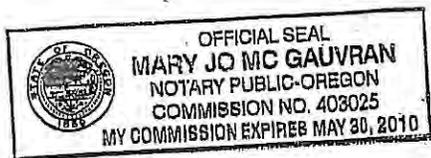


State of Oregon, County of Clackamas:

Personally appeared the above named Lois McLeod before me on Jan 11, 2007 and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: [Signature]
Notary Public for Oregon

My Commission Expires: 5-30-10

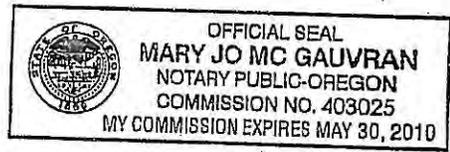


State of Oregon, County of Clackamas:

Personally appeared the above named Mark A. Adcock before me on Jan 24, 2007
and acknowledged the foregoing instrument to be (HIS)(HER)(THEIR) voluntary act and deed.

Before Me: *Mary Jo Mc Gauran*
Notary Public for Oregon

My Commission Expires: 5-30-10



6

NORTHWOOD INVESTMENTS LEGAL DESCRIPTION
FEE NUMBER 90-20689
CLACKAMAS COUNTY, OREGON

IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON

PARCEL I:

A tract of land situated in the Champing Pendleton D.L.C. No. 58, in Sections 28, 29, 32 and 33, Township 3 South, Range 1 East, of the W.M., described as follows:

Beginning at an iron pipe on the Southerly boundary of Territorial Road at the northeast corner of that tract of land conveyed to Earl Oliver and Sabina Oliver, husband and wife, by Deed recorded November 16, 1951, in Book 450, page 696, Deed Records, said iron pipe being North 8.47 chains, South 89° 29' West 16.35 chains and North 12° 00' West 9.036 chains, from the southeast corner of the Champing Pendleton D.L.C., in Township 3 South, Range 1 East, of the W.M.; thence South 78° 04' West along the southerly line of Territorial Road 187.57 feet to an iron pipe, said point being the northeast corner of a tract of land conveyed to Richard T. Mosier, et ux, by Warranty Deed recorded June 15, 1976, Fee No. 76 19823; thence South 12° 09' East 558.2 feet to the southeast corner of a tract described in Contract of Sale recorded February 28, 1975, Fee No. 75 5066; thence South 89° 29' East to the southeast corner of said Oliver tract; thence North 12° 09' West along the easterly line of said Oliver tract to the point of beginning.

PARCEL II:

Part of the southeast one-quarter of the northeast one-quarter of Section 32, Township 3 South, Range 1 East, of the W.M., described as follows:

Beginning at the southeast corner of a tract of land conveyed to John Mickelsen, et ux, by Warranty Deed recorded January 28, 1957, in Book 521, page 348, Deed Records, said point also being West 1320 feet and South 393.6 feet from the northeast corner of the Wesley Joslin D.L.C.; thence West 166.00 feet; thence North 100.00 feet; thence West 25.00 feet; thence South 100.00 feet; thence West 368.7 feet; thence South 214.7 feet to the northwest corner of a tract of land conveyed to Edward N. Cole, et ux, by Warranty Deed recorded April 24, 1956, in Book 510, page 19, Deed Records; thence East 235.00 feet to the most northerly northeast corner of said Cole tract; thence South 155.00 feet to an interior angle of said Cole tract; thence East to the most easterly northeast corner of said Cole tract; thence South 15 feet to the southerly line of a tract of land conveyed to Earl Oliver, et ux, by Warranty Deed recorded September 26, 1947, in Book 397, page 28, Deed Records; thence East along the south line of said Oliver tract 20 feet to the southeast corner thereof; thence North along the east line of said Oliver tract, 384.7 feet to the place of beginning.

PARCEL III:

A tract of land lying in Section 32, Township 3 South, Range 1 East, more particularly described as follows:

Beginning at a point which bears West 1332 feet from the northeast corner of the Wesley Joslin D.L.C., said point being also the Northeast corner of that certain tract of land described in deed to John P. Tatone in Book 227, page 162; running thence South along the east line of said Section 32 a distance of 393.6 feet; thence West 166.00 feet; thence North 100.00 feet; thence West 25.00 feet; thence South 100.00 feet; thence West 368.7 feet; thence North 393.6 feet; thence East 559.7 feet to the place of beginning.

PARCEL IV:

A tract of land located in Section 33, Township 3 South, Range 1 East, of the W.M., described as follows:

Beginning at the northwest corner of Lot 2, Oliver Addition No. 4; thence South $00^{\circ} 18'$ East along the west line of said Lot 2, a distance of 88.18 feet to the southwest corner thereof; thence continuing South $00^{\circ} 18'$ East 60.00 feet to the northwest corner of Lot 3, Oliver Addition No. 4, said point also being the northeast corner of that tract of land conveyed to the Archdiocese of Portland in Oregon by Deed recorded May 4, 1953, in Book 468, page 504, Deed Records; thence West along the northerly line of said Archdiocese of Portland in Oregon tract and the westerly extension of the south line of Wait Avenue as it appears in the recorded plat of Canby Acres, 580.00 feet to the west line of that tract of land conveyed to Earl Oliver and Sabina Oliver by Deed recorded May 22, 1950, in Book 431, page 437, Deed Records; thence North along the west line of said Oliver tract, 140.00 feet, more or less, to the northwest corner thereof; thence East along the northerly line of said Oliver tract, 579.50 feet to the place of beginning.

PARCEL V:

Part of the southeast one-quarter of the northeast one-quarter of Section 32, Township 3 South, Range 1 East, of the W.M., described as follows:

Beginning at the northeast corner of Lot 6, Oliver Addition No. 6; thence North $89^{\circ} 39'$ East, 59.21 feet to the east line of a tract of land conveyed to Earl Oliver, et ux, by Warranty Deed recorded December 4, 1961, in Book 596, page 3, Deed Records; thence South $0^{\circ} 09'$ West along the east line of said Oliver tract to the north line of Lot 1, Block 3, Oliver Addition No. 8; thence West along the north line of said Lot 1 to the east line of Lot 6, Oliver Addition No. 5; thence North along the east line of Lots 6 and 7, Oliver Addition No. 5, to the northeast corner of said Lot 7; thence West along the north line of said Lot 7, a distance of 10 feet to the southeast corner of the plat of Oliver Addition No. 6; thence North along the east line of said Oliver Addition No. 6, a distance of 560.73 feet to the place of beginning.

PARCEL VI:

Beginning at the most easterly southeast corner of the Champing Pendleton D.L.C. No. 58, in Township 3 South, Range 1 East, of the W.M.; thence South $89^{\circ} 39'$ West along the south boundary of said claim, 1332.55 feet to the southeast corner of that certain tract conveyed to John P. Tatone, et ux, by deed recorded April 25, 1935, in Book 227, page 162, Deed Records; thence North 559.02 feet to an iron pipe at the northeast corner of said Tatone tract; thence North $89^{\circ} 39'$ East along the north boundary of the land conveyed to Arndt Boe by deed recorded in Book 102, page 116, Deed Records to a stone 20 x 6 x 4 inches marked "X" on top, set on the west boundary of the tract conveyed to J. Lee Eckerson by deed recorded January 19, 1921, in Book 161, page 387, Deed Records; thence South 5.05 chains to the southwest corner of the tract conveyed to Peter Kyllö by deed recorded September 2, 1923, in Book 172, page 229, Deed Records; thence North $89^{\circ} 39'$ East, 10.90 chains to the east boundary of claim; thence South along the east boundary 3.42 chains to the place of beginning.

ALSO beginning at the northeast corner of the Wesley Joslin D.L.C. in Section 33, Township 3 South, Range 1 East, of the W.M.; thence West 80 rods; thence South 20 rods; thence East 40 rods; thence North 310 feet; thence East 40 rods to the east line of said claim; thence North 20 feet to the place of beginning.

EXCEPT that portion lying east of the west line of Lot 6, Eastwood Annex No. 2 extended South.

ALSO EXCEPT those portions within the boundaries of Eastwood Estates, Eastwood Estates Annex No. 1 and Eastwood Estates Annex.

PARCEL VII:

Part of the Champing Pendleton D.L.C. No. 58, in Township 3 South, Range 1 East, of the W.M., described as follows:

Beginning at a point 8.47 chains North and 10.90 chains South $89^{\circ} 29'$ West from the most easterly southeast corner of the Champing Pendleton D.L.C.; thence continuing South $89^{\circ} 29'$ West, 5.45 chains to the southeast corner of that tract conveyed to Earl Oliver and wife by Deed recorded November 16, 1951 in Book 450, page 696, Deed Records; thence Northwesterly along the easterly line of said Oliver tract and an extension thereof, 9.03 chains to the center of the Territorial Road; thence North $79^{\circ} 15'$ East along the center of said road, 7.52 chains to a point due North of the point of beginning; thence South 10.4 chains to the point of beginning.

EXCEPT the following described tract:

Part of the Champing Pendleton D.L.C. No. 58, Township 3 South, Range 1 East, of the W.M., in the City of Canby, described as follows:

Beginning at a point 8.47 chains North and 10.90 chains South $89^{\circ} 29'$ West from the most easterly southeast corner of the Champing Pendleton D.L.C.; thence continuing South $89^{\circ} 29'$ West 5.45 chains to the southeast corner of that tract conveyed to Earl Oliver and wife by Deed recorded November 16, 1951 in Book 450, page 696, Deed Records; thence Northwesterly along the course of the easterly line of said Oliver tract to a point which is 320 feet 6 inches Southeasterly from the northeasterly line of Territorial Road measured along said easterly course and which is the true point of beginning; thence continuing Northwesterly on said westerly course to the center of the Territorial Road; thence North $79^{\circ} 15'$ East along the center of said road 140 feet; thence Southeasterly parallel with said westerly course to a point North $79^{\circ} 15'$ East of the true point of beginning; thence South $79^{\circ} 15'$ West to the true point of beginning.

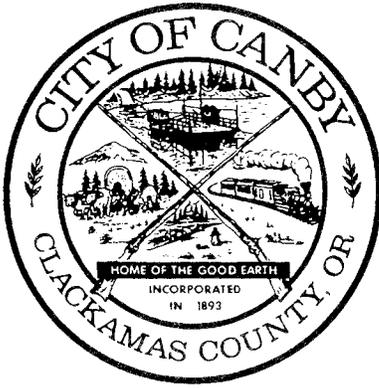
**2KRMT, INC. LEGAL DESCRIPTION
FEE NUMBER 2006-070258
CLACKAMAS COUNTY, OREGON**

LEGAL DESCRIPTION

Part of the Champing Pendleton Donation Land Claim No. 58, Township 3 South, Range 1 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point 8.47 chains North and 10.90 chains South 89°29' West from the most Easterly Southeast corner of said Pendleton Donation Land Claim; thence continuing South 89°29' West 5.45 chains to the Southeast corner of that tract conveyed to Earl Oliver, et ux, by Deed recorded November 16, 1951, in Book 450, Page 696, Clackamas County Deed Records; thence Northwesterly along the Easterly line of said Oliver Tract to a point which is 320 feet 6 inches Southeasterly from the Northeasterly line of Territorial Road, when measured along said Easterly line and the true point of beginning; thence continuing Northwesterly on said Easterly line to the center of the Territorial Road; thence North 79°15' East along the center of said road, 140 feet; thence Southeasterly, parallel with said Easterly line to a point North 79°15' East of the true point of beginning; thence South 79°15' West to the true point of beginning.





City of Canby

Office of Community Development Director

Northwood Investments
C/O Curt McLeod, General Partner
1120 NW 12th Ave
Canby, OR 97013

September 5, 2006

RE: Modification 06-08 (of SUB 05-12)

Dear Curt:

City of Canby Planning staff has reviewed your application to modify Conditions of Approval for SUB 05-12. In your letter you address Conditions **1, 4, 9, 10, and 17**. Staff determines that the application meets the "minor modification" criteria set forth in Section 16.89.090 of Canby's Municipal Code. Please refer to list below for the specific changes to the Conditions.

Condition 1: Decision = **No action at this time.** *Small changes to the plat will be reviewed at the time of plat submittal. Staff will review the plat for compliance with the conditions of approval. Substantial changes to the plat may be referred to the Planning Commission as an Intermediate Modification. Staff will not take action on this item until the plat is submitted.*

Condition 4: Decision = **No action required.** *Staff interprets the requirement for looping water lines to be subject to the review and approval of the Canby Utility Board. Staff defers to CUB's judgment in this matter.*

Condition 9: Decision = **No action required.** *In addition to the requirement for street trees in the CC&Rs staff will accept a printed notation on the construction plans clearly indicating the requirement for street trees for each lot's street frontage(s).*

Condition 10: Decision = **Approved**. The condition now reads as follows (additional language in **RED** text):

The following design parameters shall be met:

- The minimum street width for local streets shall be 28 feet where parking is limited to one street side, otherwise the width shall be 36 feet wide.
- 20 foot street width is approved for the one-way sections of N. Elm Street as shown on the approved site plan.
- **Unless otherwise approved by the Planning Department, Public Works Department, and the Canby Fire District,** the minimum curb radius for cul-de-sacs shall be 48-feet to facilitate maintenance vehicles per IFC standards.
- The “K” values for vertical curves shall meet AASHTO requirements.

Condition 17: Decision = **Approved**. The condition now reads as follows (additional language in **RED** text):

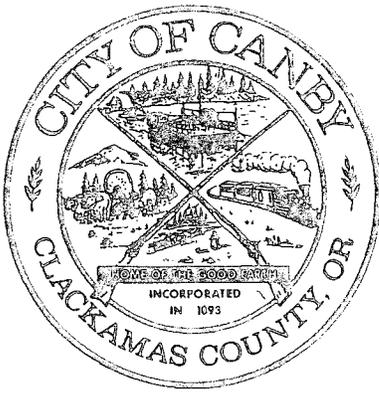
Unless otherwise approved by the Planning Department and the Public Works Department, access to the sanitary sewer line between lots 24 and 25 shall be maintained and a sewer easement of 5 feet along each side of the common boundary between lots 24 and 25 shall be maintained.

This letter serves as the record of **APPROVAL** for **MOD 06-08**. Approval shall be considered final on the date that it is mailed and a copy will remain on file at the Planning Department. If you have questions or need further assistance please contact me.

Sincerely,



Kevin C. Cook
Associate Planner



City of Canby

Planning and Building Department

May 22, 2007

Northwood Investments
C/O Curt McLeod, General Partner
1120 NW 12th Ave
Canby, OR 97013

RE: **Modification 07-09 (of SUB 05-12)**

Dear Curt:

City of Canby Planning staff has reviewed your application to modify the approved site plan for Northwoods Phase I (SUB 05-12) for lots 9 and 39. Staff determines this application meets the "minor modification" criteria set forth in Section 16.89.090 of Canby's Municipal Code.

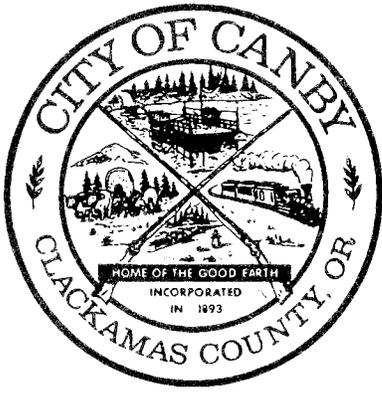
The application requests a reducing the originally proposed 20-foot wide access easements to 15-foot wide.

Staff finds that the request complies with Section 16.64.040 of the CMC.

This letter serves as the record of **APPROVAL** for **MOD 07-09**. Approval shall be considered final on the date that it is mailed and a copy will remain on file at the Planning Department. If you have questions or need further assistance please contact me.

Sincerely,

Kevin C. Cook
Associate Planner



City of Canby

Office of Community Development Director

Northwood Investments
C/O Curt McLeod, General Partner
1120 NW 12th Ave
Canby, OR 97013

March 22, 2007

RE: Modification 07-02 (of SUB 05-12)

Dear Curt:

City of Canby Planning staff has reviewed your application to the approved site plan for Northwoods Phase I (SUB 05-12). Staff determines this application meets the "minor modification" criteria set forth in Section 16.89.090 of Canby's Municipal Code.

The application requests a modified curb bump-out configuration at the intersection of NE 13th Ave. and N Elm Street.

This letter serves as the record of **APPROVAL** for **MOD 07-02**. Approval shall be considered final on the date that it is mailed and a copy will remain on file at the Planning Department. The following are conditions of this approval:

1. A minimum 12-foot wide travel lanes shall be maintained along the east side of N Elm St. and the existing 18-foot wide travel lane shall be maintained along the west side of N Elm St.
2. Radii shall be no less than 30-feet in order to accommodate City street sweepers.
3. The design of the bump-out shall prevent the formation of standing water on street surface.

If you have questions or need further assistance please contact me.

Sincerely,

Kevin C. Cook
Associate Planner



City of Canby

MEMORANDUM

Date: Prepared for the 2/24/14 Planning Commission Meeting
From: Bryan Brown, Planning Director/Angie Lehnert, Associate Planner
RE: Northwoods SUB 05-12 and Development Agreement extension

The partners of the Northwoods Development have requested a one-year extension of the approval of the following documents:

- Northwoods Estates Development Agreement, dated January 11, 2007
- “Northwoods Estates, Canby OR. Conceptual Development Plan”, dated December 29, 2005

The most recent extension for the approval of these documents expired on January 24, 2014. The request was made in November 2013, and staff determines that the request is still valid because the request was made with sufficient time before the expiration date.

The Code states the following on subdivision plat approvals:

“16.68.020 Submittal of subdivision plat.

Within one year after approval of the tentative plat, the subdivider shall cause the subdivision or any part thereof to be surveyed and a plat prepared in conformance with the tentative plat, as approved. The subdivider shall submit the original hardboard drawing, a Mylar copy, and any supplementary information to the city. If the subdivider wishes to proceed with the subdivision after the expiration of the one-year period following the approval of the tentative plat, he must formally request an extension of time, in writing, stating the reasons therefore. The City shall review such requests and may, upon finding of good cause, allow a time extension of not more than six additional months, provided that the request for the time extension is properly filed before the end of the one-year approval period.”

The motion from the January 24, 2011 Planning Commission Meeting reads:

“Commissioner Kocher moved that the Planning Commission approve extending existing land use approvals (including one Development Agreement and one 180 day fee extension) SUB 05-12, MLP 08-05, DR 08-01/SUB 08-01, CPA 08-01/ZC 08-01, SUB 08-03 and DR 09-02 for an additional three years or when substantial code or other applicable regulatory changes occur. It was seconded by Commissioner Milne. The motion passed 5-0.”

The code does not state any specific criteria for granting extension requests but the motion above does mention code and regulatory changes. The most relevant city codes that are adopted today and that were not in place at the time of original approval are:

- The 2010 edition of the Transportation System Plan
- Various Chapter 16 code amendments and the addition of LID stormwater management language
- The 2012 version of the Public Works Design Standards

Other agencies such as Clackamas County and Canby Utility Board have also likely made code and plan changes since the original approvals. The Planning Commission should consider these code changes when making their decision.

Recommendation: Staff recommends that the Planning Commission **approve** the extension request.

Recommended Motion: *I move that the Planning Commission approve to extend approval of the following documents for an additional year:*

- Northwoods Estates Development Agreement, dated January 11, 2007
- “Northwoods Estates, Canby OR. Conceptual Development Plan”, dated December 29,2005

CURRAN-McLEOD, INC.
CONSULTING ENGINEERS

6655 S.W. HAMPTON STREET, SUITE 210
PORTLAND, OREGON 97223

January 10, 2014

Mr. Bryan Brown
City of Canby, Planning Department
170 NW 2nd Ave
Canby, OR 97013

**RE: CITY OF CANBY
NORTWOOD ESTATES (SUB 05-12), PHASES 3 & 4**

Dear Bryan,

On January 24, 2011, the Findings, Conclusions and Final Order by the City of Canby Planning Commission has granted the developers of this development a period of three years to develop the remaining three phases of this project from the date of the Development Agreement recordation. It also permits an unlimited number of extensions not to exceed one-year apiece.

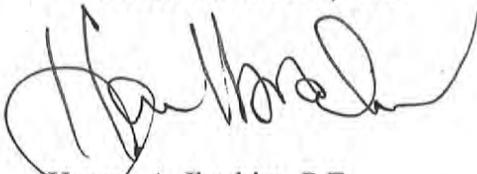
The Development Agreement recorded between the City of Canby and Northwood Investment Partnership (Clackamas County Record # 2007-007387) was extended until January 24, 2014 by the Canby Planning Commission at their regular meeting on January 24, 2011 (copy attached).

On behalf of the developers (Northwood Investment Partnership), we are requesting the approval of the Planning Commission for a one (1) year extension to this agreement.

Should you have any questions, please feel free to contact our office.

Very truly yours,

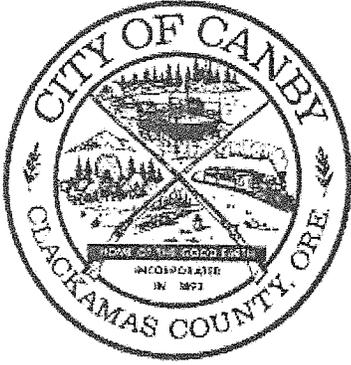
CURRAN-McLEOD, INC.



Hassan A. Ibrahim, P.E.

cc: Northwood Investment Partnership

C:\H A \Projects\1391 Northwood Estates\DA Extension \tr phases 3 & 4.wpd



City of Canby

Planning and Building Department

January 26, 2011

Dear Applicant,

On January 14, the City notified you that at least one of your land use projects is operating as an "extension" and City Staff would request that the Planning Commission extend your project approval for an additional three years - or when code or other applicable regulatory changes occur.

The Planning Commission discussed this matter at their Monday January 24, 2011 Hearing. The Commission **approved** this extension unanimously. Therefore, your project Decision, associated variances and fees (of the Cases listed in exhibit B) are extended until January 24, 2014.

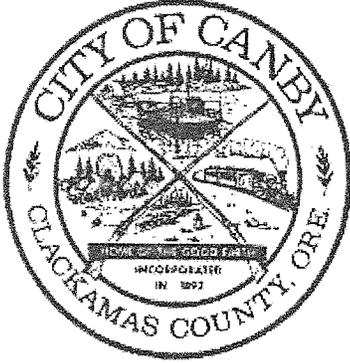
A note will be placed in each respective file. If you have not developed your project by that time, you may submit a letter requesting an additional extension; but granting that will be at the Planning Commission's discretion with a Staff recommendation.

If you have any questions please contact Markus Mead at 503-266-7001 X262 or meadm@ci.canby.or.us.

Attachments:

Exhibit A: Introductory letter Jan 14, 2011

Exhibit B: Staff Memo To Planning Commission.



City of Canby

Planning and Building Department

January 14, 2011

Dear Applicant,

You are receiving this letter because at least one of your land use projects is operating as an "extension". The City recognizes the sudden nationwide economic downturn has drastically changed the real estate and development market and has prevented you from completing your project(s). To assist you, the Canby Planning Staff would like to extend your project approval for an additional three years - or when code or other applicable regulatory changes occur (which is a typical condition). The Canby Code limits the total extension time to two years. However, the Canby Planning Commission can, with its discretion and with the benefit of a public hearing, lengthen extension timelines with a formal request. These extension requests typically require the applicant to submit a letter to the Planning Commission and other administrative procedures. These are done individually, according to the project's original approval timeline. Staff would like to help your projects by requesting that the Planning Commission extend the extensions for all of these projects simultaneously.

This has the following benefits for your project(s):

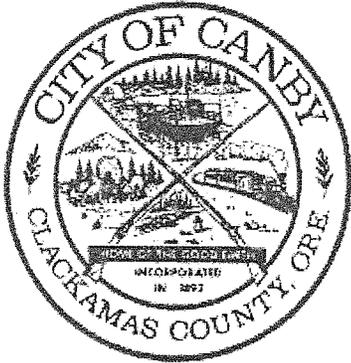
- You won't have to track your own timelines and submit individual letters.
- Your projects and fees would be valid and vested for approximately three additional years.

The following is a relative drawback from this proposal:

- Some of the projects would receive a slightly greater or lesser benefit depending on their respective approval timelines. However, each project would receive at least more than two years of a lengthened extension.

Staff believes that this request is in the best interest of all the subject projects as well as Staff and the Planning Commission. The Planning Commission will discuss this matter at their Monday January 24, 2011 Hearing at 7:00PM. If you would like to submit a letter of support or comment to the Commission, you are welcome to do so.

If you have any questions please contact Markus Mead at 503-266-7001 X262 or meadm@ci.canby.or.us.



City of Canby

Planning and Building Department

TO: *Planning Commission Members*
FROM: *Markus Mead, Associate Planner*
DATE: *January 24, 2011*
SUBJECT: *Extension of Development Agreements and Decisions; Omnibus Extension Request*

Summary:

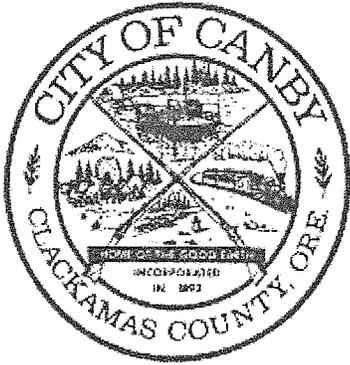
This is a request by Staff to extend six existing land use approvals (including one Development Agreement) for an additional three years or when code or other applicable regulatory changes occur. Economic conditions outside the control of the applicants have caused these projects to be delayed.

Background:

The sudden nationwide economic downturn drastically changed the real estate and development market. Development projects that were to be developed in phases and projects that were approved just before the crash (approximately 2008) were the most affected. They were presented with a land use approval but without the ability to act on that approval or develop the properties.

In the past month, Staff has issued additional extensions for two of the below projects. Issuing individual extensions and tracking project status is time consuming for both Staff and the applicant. The proposed omnibus extension would create efficiencies for both parties.

According to Canby's Municipal Code, a land use decision is valid for one year. The Planning Director has the authority to grant one, 1-year extension. Additional extensions must be granted by the Planning Commission which has the authority to grant additional extensions. As the national and local economy is still unsettled, these projects would likely all be requesting additional extensions by the Planning Commission. The proposed "omnibus" extension method would create efficiencies for Staff, the applicant and the Planning Commission.

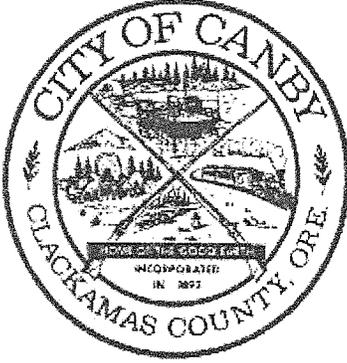


City of Canby

Planning and Building Department

The following is a summary of each subject project for which the extension is requested:

Case No./Address	Applicant	Type	Decision Year
SUB 05-12 Northwoods Estates/ North of NW 9th Ave, South of NWTerritorial Rd., East of Birch St., and West of Grant St.	Northwoods Investments	41-Lot Subdivision Phased (Development Agreement)	March 27 2006, (Dev. Agreement January 26, 2007)
MLP 08-05 Zimmer Property TL 100 / Southeast of intersection of S.E. 1st Ave and S.E. Walnut Street)	AAI Engineering	Minor Land Partition of approximately 23.4 acres of land into 3 parcels ranging in size from 96,893 to 714,194 square feet. South of S.E. 1 st Avenue between S.E. Walnut Street and S. Mulino Road (identified by Clackamas County Assessor Map and Tax Lot No. 31E34- 00100).	January 26, 2009
DR-08-01/ 486 N.E. 3rd Ave, 463 N.E. 4th Ave	Paul Snegirev	Subdivision & Site and Design Review: subdivide approximately 16,021 square feet of land into 5 lots ranging in size from 5,013 to 2,029 square feet. The applicant is also requesting that Planning Commission grant concurrent variances and access spacing exception. This project initially had a subdivision (SUB-08-01); which the applicant has knowingly allowed to expire; this proposal would only extend the Development Review.	April 13, 2009
CPA-08-01, ZC-08-01/ 1793 SE 1st Ave, 1907 SE 1st Ave	Root Holdings	Zone Change and Comp Plan Amendment (No Decision: Waived 180- Day Deadline)	March 18, 2009
SUB-08-03/ Southwest of intersection of S.E. 1st Ave and S.E. Walnut Street	AAI Engineering	Subdivision: subdivide approximately 20.21 acres of land into 7 lots ranging in size from 79,553 to 175,278 square feet. The applicant is also requesting that Planning Commission grant concurrent variances and access spacing exception.	Jan. 26, 2009
DR09-02/Dragonberry Produce 300 Block of S. Walnut Street	Chris Spurgin	14,458 square foot commercial building and an accessory parking lot on an approximately 2 acre site.	February 08, 2010



City of Canby

Planning and Building Department

Staff Analysis:

According to Section 16.68.020 of Canby's Municipal Code, a land use Decision for a subdivision, Section 16.58.060.E for a lot line adjustment, 16.60.060.D for a minor land partition, and Section 16.49.060.2 for site and design review, is valid for one year. The Planning Director has the authority to grant one, 1-year extension. Additional extensions must be granted by the Planning Commission which has the authority to grant additional extensions. There is no limitation to the extension parameters. The Planning Director and / or the Planning Commission may review changes to the City's Municipal Code, state statute and / or public comment or other relevant regulation or policy to restrict the extension's validity.

16.68.020 Submittal of subdivision plat.

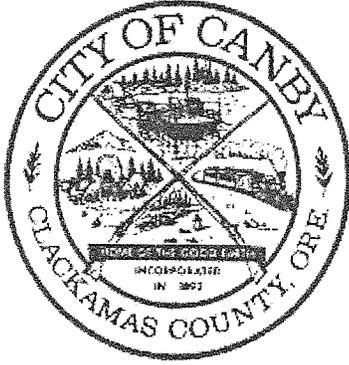
Within one year after approval of the tentative plat, the subdivider shall cause the subdivision or any part thereof to be surveyed and a plat prepared in conformance with the tentative plat, as approved. The subdivider shall submit the original hardboard drawing, a Mylar copy, and any supplementary information to the city. If the subdivider wishes to proceed with the subdivision after the expiration of the one-year period following the approval of the tentative plat, he must formally request an extension of time, in writing, stating the reasons therefore. The City shall review such requests and may, upon finding of good cause, allow a time extension of not more than six additional months, provided that the request for the time extension is properly filed before the end of the one-year approval period. (Ord. 740 section 10.4.40(C)(9)(b), 1984; Ord 1237, 2007)

16.58.060 City liability - compliance.

E. The Planning Director may approve a single one-year extension to the original one-year period. Applicants must file a request for such extension in writing, stating the reasons the request is needed. The Planning Director shall review such requests and may issue the extension after reviewing any changes that may have been made to the text of this title and any other pertinent factors, including public comment on the original application. (Ord. 740 section 10.4.20(E), 1984; Ord. 955 section 27, 1996; Ord. 1080, 2001)

16.60.060 Final procedures and recordation.

D. The Planning Director may approve a single one-year extension to the original one-year period. Applicants must file a request for such extension in writing, stating the reasons the request is needed. The Planning Director shall review such requests and may issue the extension after reviewing any changes that may have been made to the text of this title and any other pertinent factors, including public comment on the original application. (Ord. 740 section 10.4.30(D), 1984; Ord. 1080, 2001)



City of Canby

Planning and Building Department

16.49.060 Time limit on approval.

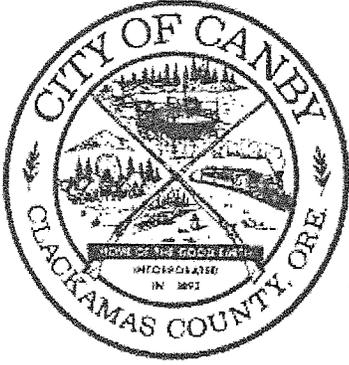
Site and Design Review Board approvals shall be void after twelve (12) months unless:

- 1. A building permit has been issued and substantial construction pursuant thereto has taken place, as defined by the state Uniform Building Code; or*
- 2. The Planning Department finds that there have been no changes in any ordinances, standards, regulations or other conditions affecting the previously approved project so as to warrant its resubmittal. (Ord. 848, Part III, section 4, 1091)*

The extension for CPA-08-01, ZC-08-01 would allow the fees to not expire. The applicant paid the fees for a Comprehensive Plan Amendment and Zone Change and then Waived their 180-Day Decision deadline due to an incomplete application. The application was deemed "incomplete" because the applicant's Traffic Impact Analysis was waiting for the updated Transportation System Plan. Approval of this extension would not extend a Land Use Decision, but would allow the applicant to complete their application within the extension timeline without paying additional fees. Authority to do this is found in CMC 16.49.060.2

In general, extending these timelines would result in some projects gaining more benefit than others respective to their current extension status and timeline. For example, an application that has used the initial Decision annual time with an extension would benefit more than one that has just been granted an extension. This Request would create uniform extension dates for all these projects. This method would create efficiencies for both Staff and the Planning Commission as well as the applicants. The alternative of granting longer extensions to each Case respective of their initial approvals would create more administrative work for Staff.

There have been no substantive changes to the City's applicable development codes to alter the subject Cases' compliance with that Title. There have been no substantive changes to the State Statute or other regulations which would conflict with these Cases. Some of the above Cases received concurrent variances. Upon review, these variances are not in conflict with the public need and Staff recommends including them in the extension request.



City of Canby

Planning and Building Department

RECOMMENDATION:

Staff recommends that the Planning Commission **APPROVE** the extension request including concurrent variances to applicable Cases.

Recommended Motion:

I move that the Planning Commission approve extend existing land use approvals (including one Development Agreement) SUB 05-12 MLP 08-05, DR-08-01/SUB-08-01, CPA-08-01/ ZC-08-01, DR09-02 and SUB-08-03 for an additional three years or when substantial code or other applicable regulatory changes occur.