CENTRAL POINT

PLANNING COMMISSION

December 5, 2023 – 6:00:PM

Email planning@centralpointoregon.gov
to request a Zoom link for virtual participation

I. **MEETING CALLED TO ORDER**

II. **PLEDGE OF ALLEGIANCE**

III. **ROLL CALL**

IV. **CORRESPONDENCE**

V. **MINUTES**

Review and approval of Planning Commission meeting minutes.

1. Planning Commission - Regular Meeting - Nov 7, 2023 6:00 PM

VI. **PUBLIC APPEARANCES**

VII. **BUSINESS**

A. Elk Creek No-Rise Certification(Presented by Gindlesperger)

VIII. **DISCUSSION**

A. Climate Friendly Area (CFA) Study(Presented by Powers)

IX. **ADMINISTRATIVE REVIEWS**

X. **MISCELLANEOUS**

XI. **ADJOURNMENT**

Individuals needing special accommodations such as sign language, foreign language interpreters or equipment for the hearing impaired must request such services at least 72 hours prior to the Planning Commission meeting. To make your request, please contact the City Recorder at 541-423-1015 (voice), or by e-mail at: Rachel.neuenschwander@centralpointoregon.gov.

Si necesita traductor en español o servicios de discapacidades (ADA) para asistir a una junta publica de la ciudad por favor llame con 72 horas de anticipación al 541-664-3321 ext. 201.

CITY OF CENTRAL POINT
PLANNING COMMISSION MEETING MINUTES
November 7, 2023

I. MEETING CALLED TO ORDER AT 6:04 P.M.

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL

Commissioners Tom Van Voorhees (Chair), Pat Smith, Jim Mock, Robin Stroh, Alicia Van Riggs, Don Dixon, and Kay Harrison were present. Also in attendance were Planning Director Stephanie Powers, Community Planner Justin Gindlesperger, City Attorney Sydnee Dreyer, City Manager Chris Clayton, Public Works Director Matt Samitore, Construction Services Supervisor Greg Graves and Planning Secretary Karin Skelton, Traffic Engineer Ejaz Kahn (virtually) Ed Christiansen, Civil Engineer (virtually).

IV. CORRESPONDENCE

Letter from Central Point Resident Josiah Green
Attachment "T" – Letter from Shelly Hohl dated 9/12/23
Attachment "U" – Letter from concerned Residents of Central Point East dated 10/29/23
Attachment "V" – E-mail correspondence from Scott and Debbie Randol dated 11/1/23
Attachment "W" - E-mail correspondence from Daniel Harris dated 11/6/23
Attachment "X" – E-mail from Fire District 3 dated November 6,2023
Attachment "Y" – E-mail from Ryan Bair dated November 7, 2023

V. MINUTES

Jim Mock made a motion to approve the October 3, 2023 Minutes. Robin Stroh seconded. ROLL CALL: Kay Harrison, Pat Smith, yes; Jim Mock, yes; Robin Stroh, yes; Alicia Van Riggs, yes; Don Dixon, yes.

VI. PUBLIC APPEARANCES

None

VII. BUSINESS

A. Continued Public Hearing regarding Urgent Care Medical Office Site Plan and Architectural Review

Chair Tom Van Voorhees stated this was a continued public hearing and read the rules governing a quasi-judicial hearing.
Commissioner Alicia Van Riggs stated she lived in the subject neighborhood and declared she believed it would not be possible for her to make an unbiased decision and recused herself.

The Commissioners had no ex parte contact, or bias to declare. There were no challenges to the impartiality of the Commissioners.

Community Planner Justin Gindlesperger gave an overview of the Site Plan Architectural Review (SPAR) agenda, objective and approval criteria. He reviewed the project background and described the existing conditions of the property. He reviewed the tentative partition plan which was approved at the September 5, 2023 public hearing, stating that interior street with connectivity to Oakview Ave. and Ridgeway Avenue was required as part of that application. He stated the property was zoned for commercial use at the time Central Point East was developed.

Mr. Gindlesperger reviewed the building design and landscape plan. He explained the conclusions of the Traffic Impact Analysis and conditions of approval.

He presented the new testimony regarding the Land use, stating staff's conclusions are based on the evidence in the record and expert testimony.

He reviewed the Public works memorandum, the Traffic Impact Analysis and comments from Fire District 3. He addressed public comments regarding the traffic impact and emergency egress.

Planning Director Stephanie Powers explained the role of the Planning Commission is to consider how the application meets the criteria in the Municipal Code and the evidence in the record and approve or deny on those criteria.

Mr. Gindlesperger reviewed the approval criteria stating staff was recommending approval of the Site Plan and Architectural Review application subject to the recommended conditions of approval.

Daniel Harris Agent
Mr. Harris stated the traffic engineer and the civil engineer were available online to answer any technical questions. He explained urgent care facility would not perform surgeries but would stabilize emergencies for transport to hospital and perform minor medical treatments.

There were no questions.

Public Hearing was opened

Linda Borum, Ridgeway Ave.
Ms. Borum expressed concern about increased traffic and cars parked in the subdivision. She was worried about the safety of children playing in front of their homes. She said there would be undesirable people accessing the neighborhood and teenagers driving dangerously.

Aaron Ott, Ridgeway Ave.
Mr. Ott felt it was unusual for a commercial facility to be in such close proximity to a residential area. He felt the citizens' concerns were not being heard. He said Fire District 3 had given different information than he was hearing from the Planning Commission.

Sandy Nelson, White Oak Ave
Ms. Nelson expressed concern about the connectivity to the neighborhood. She stated the development of Costco and other businesses has negatively impacted the quality of life for the residents of Central Point East. She stated that there were currently no traffic issues within the subdivision. She said the residents had no problems exiting the neighborhood during evacuation however they were stuck in traffic on Wilson Road. She absolutely disagreed with the TIA findings and expressed concern about children's safety.

Mr. Van Voorhees asked for clarification of the statement that the residents have been greatly affected by the development along Biddle, but there are no traffic issues in the subdivision.

Ms. Nelson responded stating that 18 years ago there was no commercial development along Biddle and there were no traffic issues. Now there is quite a bit of traffic. She said the impact was not within the subdivision but on the surrounding streets.

June Lumbrechtsen, Ridgeway Ave.
Ms. Lumbrechtsen stated her main concern is the safety of the children. She requested that the streets remain closed.

Ralph Nelson, White Oak
Mr. Nelson stated the residents did not know the connection of the streets was part of the Partition application which was approved by the Planning Commission on September 5, 2023.

Mr. Van Voorhees stated there were many residents in attendance at the September 5, 2023 meeting and many people spoke at the public hearing. He said the public hearing for the SPAR was continued for two months to allow staff to review all testimony. He explained the noticing criteria.

City Attorney Sydnee Dreyer explained that the original notice for the September 5th meeting had two items on the agenda. The partition for the urgent care facility and the Site Plan and Architectural Review (SPAR). The Public Works Staff Report Recommended connectivity as part of the Partition application. A number of people spoke on the partition application. The Planning Commission voted to approve the Partition. The hearing on the Site Plan and Architectural Review was opened and was continued to the October 3, 2023 meeting. At that time it was continued to this November 7, 2023 meeting.

Mr. Nelson stated he had evacuated the area twice and there was no issue exiting the subdivision. The traffic problems were on the surrounding streets.

Marty Smith, Orchardview Ave.
Mr. Smith said he thought access should be taken from Table Rock and Biddle roads only. He was concerned about vandalism and the type of people who would drive through their neighborhood if the streets were opened. He was concerned about the traffic impacts. He added, when he bought his property in 2017, his realtor did not inform him this property was zoned commercial.

Scott Randol, Brookdale Dr.
He concurs with the other residents. He acknowledged the Traffic Impact Analysis (TIA) indicated minimal impact, however they did not do traffic counts on the neighborhood streets. He stated it was on the streets outside the subdivision where they encountered traffic problems. He disagreed with the suggestion from Public Works to study traffic 60 days after opening the roads up

Mr. Van Voorhees stated the Planning Commission has continued this hearing for two months in order to review and evaluate the concerns surrounding the issue.

Mr. Randol stated the frustration stemmed from the rules that governed the process. These did not take into account the concerns of the residents.

Stacy Dinnell,, Ridgeway Ave.
Ms. Dinnell asked for clarification. She said she and many others did not know the connectivity issue was approved at the September 5, 2023 meeting. They were under the impression the SPAR hearing was continued in order to evaluate the connectivity issue.

Mr. Van Voorhees confirmed the Partition application included the connectivity of the two roads and was approved at the Sept. 5, 2023 meeting. However, hearing the many concerns the hearing on the SPAR application was continued in order to thoroughly evaluate the testimony.

Ms. Dinnell stated it was not clear at the September 5, 2023 meeting that the connectivity issue was included in the partition application. She challenged the Commissioners to vote according to the interests of the people in the neighborhood.

Janet Studer, Ridgeway Ave.
Ms. Studer stated she concurred with what has been stated. She said she has seen homeless people in the neighborhood. There have been robberies and a house fire. Her home was vandalized once. Cars in the neighborhood have been vandalized. She is concerned for her safety and that of her neighbors.

Michelle Mckenna, Ridgeway Ave
Ms. McKenna stated Ridgeway is a long street and there is a lot of speeding which endangers children and pets. She said she found information on the City's website regarding this process and the application. She suggested the City should find more effective ways to communicate with its citizens.

Lisa Kirkland, Ridgeway Ave.
Ms. Kirkland said she concurs with everyone. She stated she has been evacuated three times and easily got out of the neighborhood each time only to be stuck in traffic outside of the subdivision. Her main concern is safety. She feels safe walking in the neighborhood even at dusk. She expressed concern that if the streets were connected through there would be more traffic and she would no longer feel safe walking in the evening.

Natalie Scott, Ridgeway Ave
Ms. Scott said she was concerned about losing a safe area at the end of the street where her children and their friends could play. If the streets are opened it would ruin their play area. She concurred with everything that has been expressed.

Dan Harris, Agent
Mr. Harris offered to answer any questions and stated the engineers were available to address any specific concerns. There were no questions.

Public Works Director Matt Samitore explained a condition is requested to do a traffic study after 60 days in order to obtain accurate information about the traffic impact to the Central Point East neighborhood. He said that only the City Council has authority to make a policy decision and they would need accurate information in order to determine whether the streets need to be restricted or whether the impact is minimal.

Ms. Powers explained the Site Plan and Architectural Review process and criteria for approval. She said that limiting access is outside of the scope of the land use standards.

Stacy Dinnell, Ridgeway Ave.
Ms. Dinnell stated that once the streets were opened they would not ever be closed off again, and that the traffic counts would not make any difference. She was frustrated that the tentative plan was approved which included the connectivity and she asked for clarification as to why they had to be opened for the traffic study.

Mr. Samitore responded that limiting local streets was a policy decision and outside of the responsibilities of the Planning Commission. It would need to be presented to the City Council. He explained the land use process.

Ms. Dinnell stated none of the neighborhood members understood that approving the partition application included the street connectivity. She stated for the record that Ms. Powers had told her the decision would be postponed because of the community concerns.

She stated she wanted to go on the record that they should care about the community and vote no.

Ms. Powers stated for the record that we discussed the partition application, the options for final plat including the development agreement and bonding for improvements as part of that application. During the SPAR hearing there was discussion about the community's concerns. Staff did recommend this item be continued, but it was not to consider dedication of the right of way and construction of the road. It was to look at the form of the connectivity itself. The street is required in order to serve the development. Ms. Powers pointed out the map shows Orchardview and Ridgeway Avenues dead ending into the property at 4404 Biddle Road. She said if those roads were constructed to be permanently dead ended at these locations it would have been required to have an approved fire turn around such as a cul-de-sac or hammer head. In light of the Citizen Concerns, the Public Works Department has proposed to look at the impacts and present those results to the City Council, who can make a policy decision regarding limiting the access. That is not something that the standards in the zoning code or the Public Works specifications are designed to do.

She explained the options available for appealing a planning Commission decision
Ms. Powers stressed this application before the Planning Commission is to consider if it meets the design and development standards of the Municipal Code.

Ms. Powers offered to answer any questions. There were no questions.

Ryan Behr, Ridgeway Ave.
Mr. Behr asked if there was more than one plan submitted for the application.

Mr. Van Voorhees explained the applicant's plan was being voted on, however the Planning Commission was able to impose conditions if they felt it was warranted.

Mr. Behr asked the Planning Commission entertain other plans that would not impact the neighborhood.

The Public Hearing was Closed

Jim Mock made a motion to approve Resolution 913 recommending approval of the Site Plan Architectural Review Application for the Urgent Care Medical Development per the Staff Report dated of November 7, 2023. Don Dixon seconded the motion.

The Commissioners expressed appreciation of the community participation and concerns. They discussed the safety issues and the noticing criteria. They discussed the traffic and zoning issues.

Ms. Dreyer clarified Public Works has authority at any given time to modify the street connections within its standards. They can also make request of the City Council for policy decisions. The role of the Planning Commission is to vote based upon the land use

compliance with current standards. She added that no matter what the decision was, Public Works would always retain the right to manage the right of way, egress and emergency access.

Mr. Samitore proposed a condition of approval to keep the existing K-rails in place during construction. Public works would study the traffic generated and bring that information to City Council to decide if the streets should be opened.

Kay Harrison made an amendment to the motion to keep the existing K-rails on Orchardview Avenue and Ridgeway Avenue in place during construction until such time as the Public Works Department completes an analysis for City Council to consider future connectivity and emergency access. Don Dixon seconded the motion.

ROLL CALL on Amendment: Kay Harrison: yes; Jim Mock: yes; Pat Smith, yes; Robin Stroh, yes; Don Dixon, yes. Motion passed.

ROLL CALL on original motion as amended: Kay Harrison: yes; Jim Mock: yes; Pat Smith, yes; Robin Stroh, yes; Don Dixon, yes. Motion passed.

DISCUSSION

IX. MISCELLANEOUS

X. ADJOURNMENT

Pat Smith made a Motion to Adjourn. Don Dixon seconded. The meeting was adjourned at 8:18 p.m.

Tom Van Voorhees
Planning Commission Chair

PLANNING
CITY OF CENTRAL POINT, OREGON

Staff Report

Elk Creek No-Rise Certification
1772

December 5, 2023

Item Summary
Consideration of a floodplain development application to complete improvements in Elk Creek to replace an existing culvert and improve stream flow by re-establishing a natural channel. The improvements are within the Special Flood Hazard Area (SFHA) and regulatory floodway for Elk Creek. **Applicant**: City of Central Point; **Agent**: RH2 Engineering; **File No.**: FP-23004.

Background
There are seven (7) streams that flow through the City of Central Point. Elk Creek is a small tributary to Bear Creek located in the southeastern portion of the City. The project location is within the 2020 Almeda Fire burn area and is part of a post-fire rehabilitation project along the Bear Creek Greenway (Attachment 1). At this time, the City is addressing in-stream fish passage by improving low flow conditions and reducing bank erosion. To accomplish this, work will need to be done within the regulatory floodway and floodplain for Elk Creek (Attachment 4).

As a participating community in the National Flood Insurance Program (NFIP), the City requires that floodplain development activities be evaluated and permitted to minimize flood damages, promote safety and protect environmental resources. In accordance with CPMC 8.24.090, the Floodplain Development permit is subject to Type III (quasi-judicial) procedures set forth in CPMC 17.05.400. In rendering a decision on the application, the Planning Commission must consider the criteria in CPMC 8.24.200 relative to floodway development. At the December 5, 2023 meeting, staff will provide a presentation on the application and its conformance with the applicable criteria needed to restore the stream channel conditions.

Project Description:
The proposed project replace an existing culvert that is under-sized during high flows and creates a barrier to fish passage during low flows in Elk Creek. The culvert will be sunken into the channel to create a natural channel through the length of the culvert. The channel will be regraded upstream and downstream of the proposed culvert to eliminate steep gradients and a 90-degree bend in the channel will be eliminated to reduce erosion.

In accordance with CPMC 8.24.200(A), a No-Rise certification is required to evaluate the existing flood conditions before a project and the proposed flood conditions following the completion of the project. According to the No-Rise documentation, the replacement culvert and regrading the channel within Elk Creek improves flows within the channel resulting in a decrease in flood elevations and provides fish passage through the project area, where the existing culvert prevented passage (Attachment 2). Since construction of the project does not result in an increase to flood elevations, the documentation is consistent with the City's no-rise standard.

Issues
There are no issues related to this application.

Findings of Fact & Conclusions of Law
The proposed floodplain development within Horn Creek has been evaluated against the

applicable Flood Damage Prevention Criteria set forth in CPMC 8.24 and found to comply as evidenced in the Applicant's No-Rise documentation (Attachment 2) and the Planning Department's Supplemental Findings (Attachment 3).

Conditions of Approval
No conditions of approval are recommended.

Attachments
Attachment "1" – Floodplain Development Project Location Map
Attachment "2" – No-Rise Analysis (Note: Appendices are included in the record and available for review upon request)
Attachment "3" – Planning Division Findings of Fact and Conclusions of Law
Attachment "4" – Floodplain Development Application, dated 10/23/2023
Attachment "5" – Resolution No. 914

Action
Open a public hearing and consider the proposed Floodplain Development application and 1) approve; 2) approve with revisions; or 3) deny the application.

Recommendation
Approve Resolution No. 914, approving the floodplain development application to construct improvements within the regulatory floodway for Elk Creek.

ATTACHMENTS:
1. Attachment 1 - Project Location Map
2. Attachment 2 - Elk Creek No-Rise Analysis Rev_4-20231019
3. Attachment 3 - Planning Department Findings
4. Attachment 4 - Floodplain Development Permit Application
5. Attachment 5 - Resolution 914

PLANNING

CITY OF CENTRAL POINT, OREGON

Attachment 1

Elk Creek Floodplain Development & No Rise Certification

Project Location Map
File No.: FP-23004

ATTACHMENT 2

Cascade
STREAM SOLUTIONS

Technical Memorandum

DATE: Originally submitted September 7, 2022
Revised to include Attachment C October 12, 2023

TO: Tyler Duncan, PE
RH2 Engineering, Inc.

FROM: Joey Howard, PE
Cascade Stream Solutions, LLC.

SUBJECT: No Rise Assessment for Elk Creek Service Road Culvert Replacement near Bear Creek

REGISTERED PROFESSIONAL ENGINEER 64402 OREGON JUL. 11, 2000 LEONARD HOWARD

Expires: 2025.06.30

Cascade Stream Solutions (Cascade) was hired by RH2 to assist in the design of a culvert crossing Elk Creek in the City of Central Point. The new culvert will replace an existing culvert as part of post fire rehabilitation measures following a 2020 fire along the Bear Creek Greenway. Project elements are to be contained within Tax Lots 372W12B-502. The land classification is designated as Rural Tract Land. The project reach of Elk Creek is located within the City of Central Point, Jackson County, OR. The project reach lies within the Bear Creek floodplain. The Federal Emergency Management Agency (FEMA) Flood Insurance Studies (FIS) for Bear and Elk Creeks is contained in Community Number 410092 and Flood Insurance Rate Map (FIRM) 41029C1957F which has an effective dated May 3, 2011. FEMA mapped the Bear Creek (Figure 1) within the project reach as Zone AE.

The proposed improvements have been developed to improve fish passage past an existing road crossing. Project elements are shown on the preliminary design plans (Attachment A). These elements include

- Removing the existing crossing;
- Reprofiling the stream to a grade of about 200 feet;
- Re-align the stream to remove the 90 degree bend upstream of the road crossing; and
- Install a sunken box culvert using stream simulation techniques.

Cascade confirmed no insurable structures, as defined by FEMA, exist within the project area and would be impacted by the proposed restoration activities. **Cascaded determined there is no rise due to the project.**

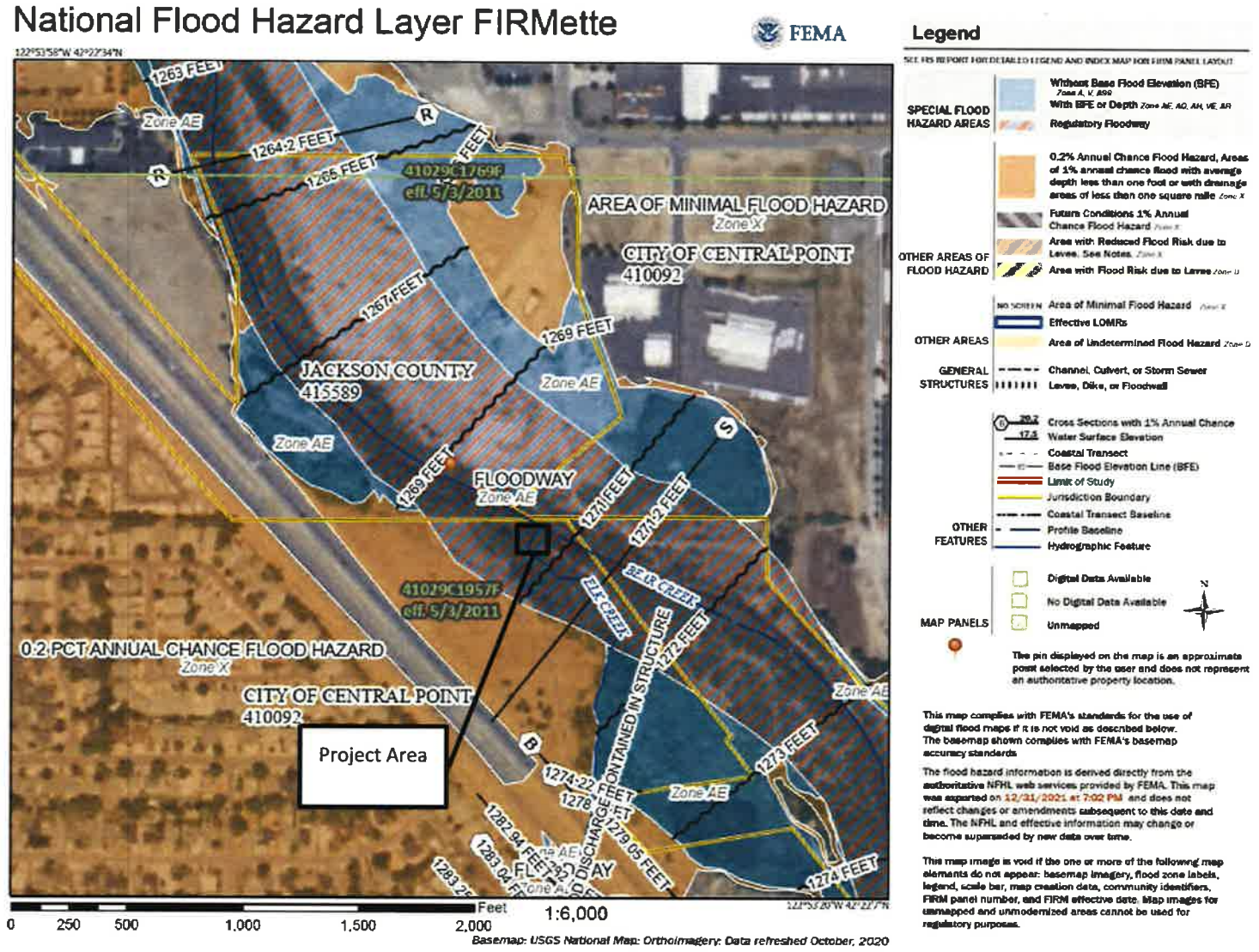


FIGURE 1. FEMA FLOOD INSURANCE RATE MAP (FIRM) FEATURES.

METHODOLOGY

The effective Flood Insurance Rate Map identifies the flood hazard on Bear Creek project reach as Zone AE. The FEMA maps show a floodplain width of about 700 feet.

Cascade conducted a hydraulic analysis for the primary channel where the work is being constructed and used a relative difference approach to identify the potential impact of replacing culvert crossing. Cascade used a 2-dimensional model, SRH-2D to assess potential impacts to the 1 percent annual exceedance flood levels (commonly referred to as the 100-year flood). Cascade computed flows through the culvert for low flows (less than the 10 percent annual exceedance flood (10-year flood) using a 1-dimensional model, HEC-RAS. Model development is described below.

At the request of the City of Central Point, Cascade developed a duplicate effective model using FEMA's effective HEC-2 model and compare this model to the project conditions model. This analysis is provided in Attachment B

1 Percent AEP: 2-Dimensional Model Development

SRH-2D hydraulic model simulations requires uses user specified topographic/bathymetric information and roughness to compute losses, boundary conditions at the upstream, downstream boundaries and relevant flow scenarios. The model is an unsteady model that requires the user to specify a computational time step and simulation duration.

Model geometry is based on field surveys conducted by Neathamer Surveying withing the project area and LiDAR obtained from DOGAMI in the floodplains and outside the project area. Existing conditions model geometry is based on a 1 ft DEM developed by Cascade from the two surfaces. Project conditions model geometry was developed by superimposing the design surface developed in Civil 3D with the existing conditions surface. The model domain encompasses the entire project area and extends from about 2000 feet downstream of the proposed crossing and about 1200 feet upstream of the crossing.

The computational mesh was developed for the project area and computational nodes assigned using elevations from the surface. The floodplain and channel are represented as an irregular triangular network (Paving Mesh Type). Lengths of floodplain vertices ranged from 5 to 10 feet for the existing conditions mesh. The vertices in the channel 3 feet. Smaller vertices near the channel were used in the project conditions mesh to define the channel.

Cascade used Manning's n values to simulate roughness to compute friction losses. Manning's n values were estimated to be 0.06 and 0.035 for floodplains and channels, respectively.

Model boundary conditions were set at the upstream and downstream ends of the model domain. A constant inlet flow (Q) of 20500 cfs, obtained from the FIS, was set at the upstream end. A uniform flow (normal depth) boundary condition was set at the downstream boundary using the channel bed slope of 0.00443 ft/ft, which was obtained by calculating the water surface slope from the FIS. The Manning's n was set to 0.045 to account for the floodplain and channel roughness.

Model simulations were run at a computational time step of 0.25 seconds and until a constant water level was achieved at the downstream boundary.

Moderate Flow: 1-Dimensional Model Development

Cascade developed a 1-dimensional model using HEC-RAS to simulate flows through the culvert. A one-dimensional model was selected to better model the flow through the culverts during moderate flows. At these moderate flows, water is contained within the primary channels and can be easily characterized by a 1-dimensional because the conveyances, velocities, and associated physical forces are only significant in the stream direction. to vary Model reaches were developed of Bear Creek below the confluence with Elk Creek and above Elk Creek as well as of Elk Creek.

Bear Creek was modeled with two reaches, one extending about 800 feet below the confluence with Elk Creek and one extending about 200 feet above the confluence with Elk Creek. Elk Creek was modeled as a single reach extending about 220 feet upstream of the confluence with Bear Creek. Cross sections were spaced between about 70 feet and 270 feet along Bear Creek and about 10 to 70 feet apart along Elk Creek. Manning's n were estimated to be 0.035 in the channel, 0.06 in the floodplain, 0.023 in the existing corrugated metal pipe culverts, and 0.012 along the top of the concrete box culvert. The concrete box invert with engineered streambed material was set to 0.035. Cascade established downstream water levels using normal depth boundary conditions with a friction slope of 0.0043 in Bear Creek.

Flow simulations were run for a flow of 261.4 cfs in Elk Creek, City of Central Point's 10 AEP peak flow, and flows of 1000, 2000, 3000, 4000, and 5000 cfs in Bear Creek. FEMA lists the 10 AEP flow as 6770 cfs.

1 Percent AEP: 2-Dimensional Model Results

Model results are shown as color contour plots for the existing and project conditions for 20500 cfs, FEMA's estimate of the 1 AEP peak flow. Figures 2 through 4 show existing conditions the water surface elevations, depths, and velocities, respectively. Figures 5 through 7 show project conditions the water surface elevations, depths, and velocities, respectively. Figures 8 and 9 show water depths within the project reach for existing and project conditions and Figure 10 shows differences in water surface depths between the project and existing conditions. Differences in water surface elevations were less than 0.005 feet. These differences are negligible. Water surface elevations over the crossing is about 14 feet for existing conditions and about 11 feet for project conditions. These model results demonstrate, the proposed road improvements do not measurably influence flow conditions during extreme events, such as the 1 AEP (100-year) flood.

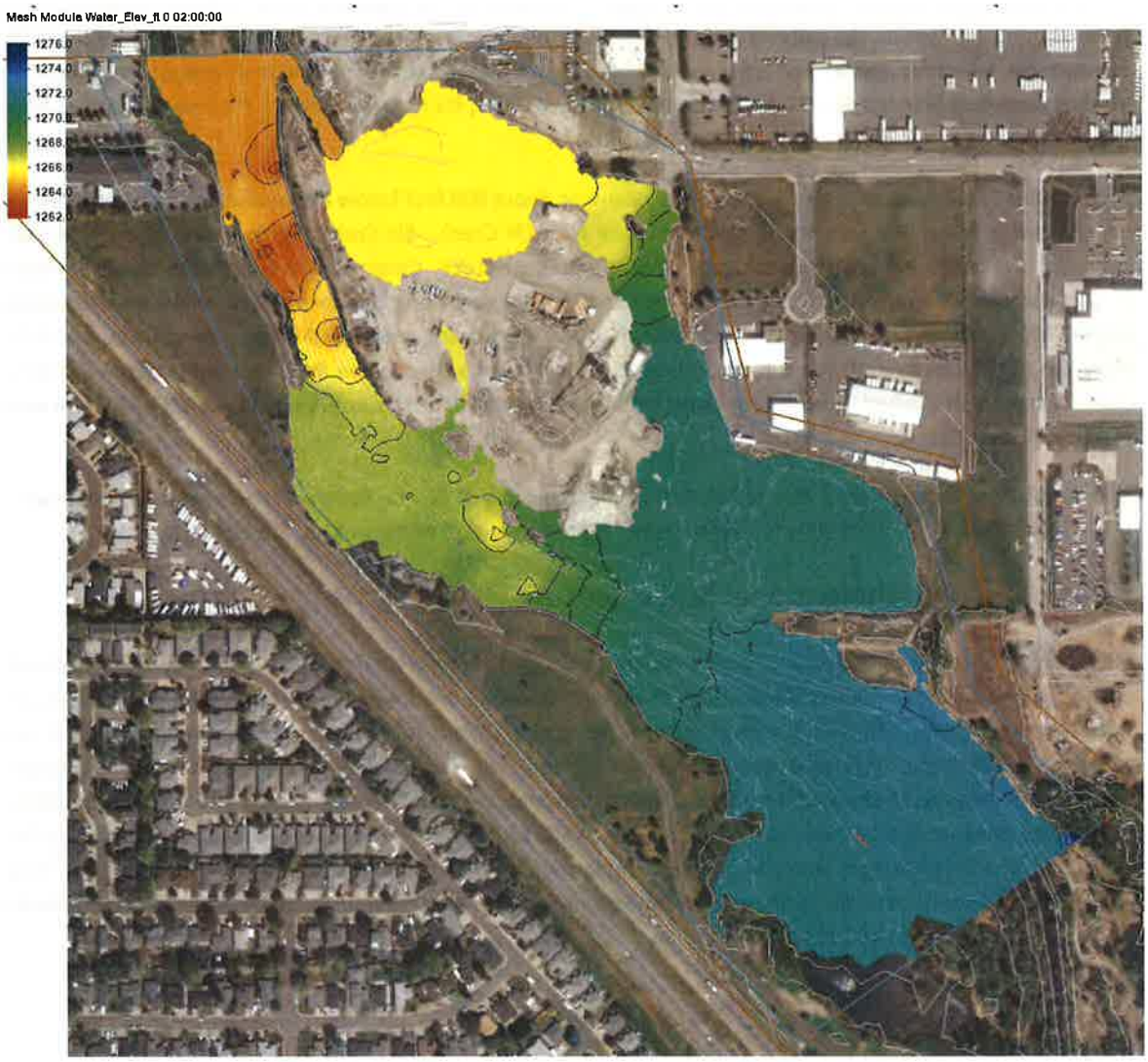


FIGURE 2. EXISTING CONDITIONS WATER SURFACE ELEVATION CONTOUR MAP - 20500 CFS

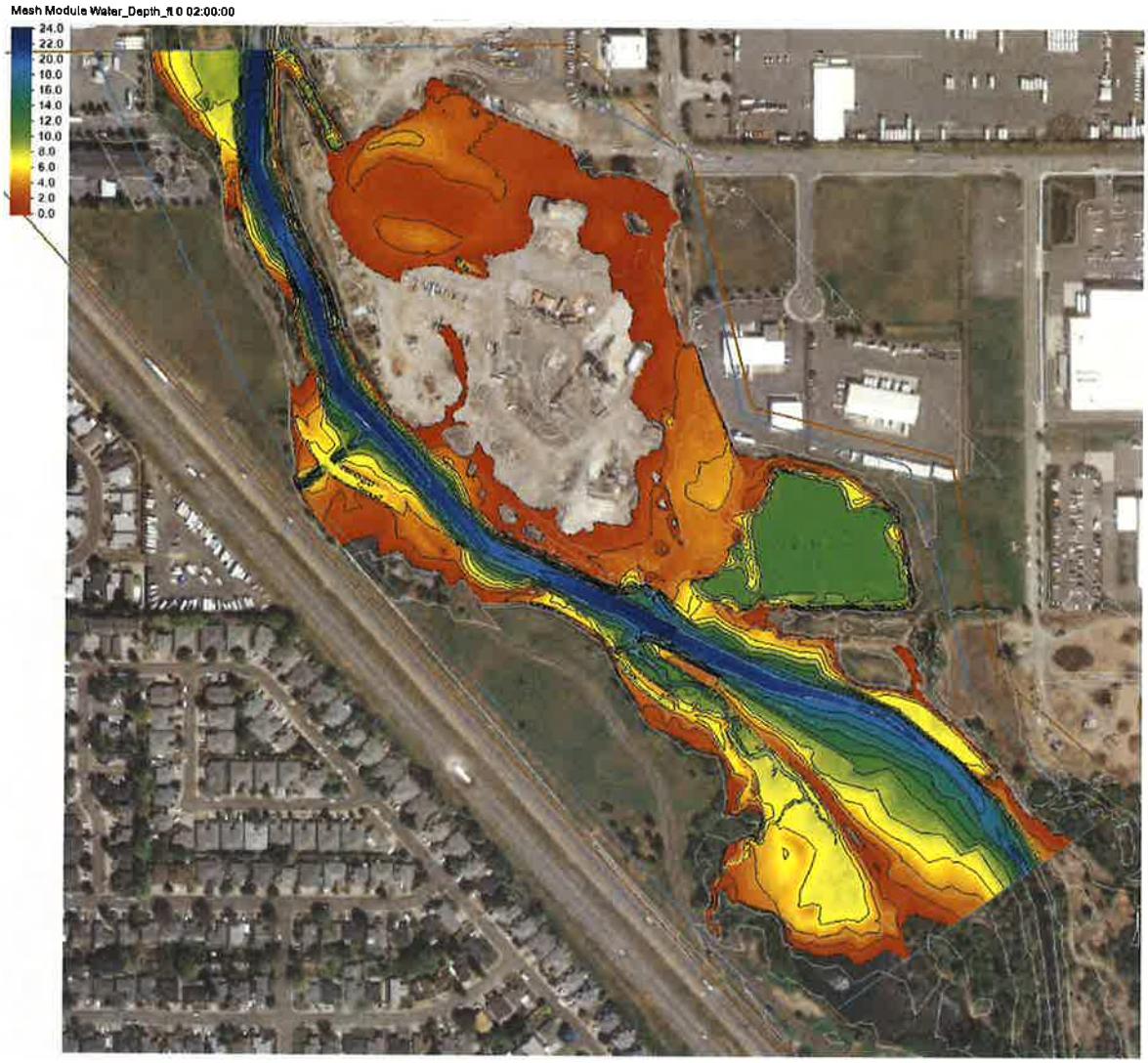


FIGURE 3. EXISTING CONDITIONS DEPTH CONTOUR MAP - 20500 CFS

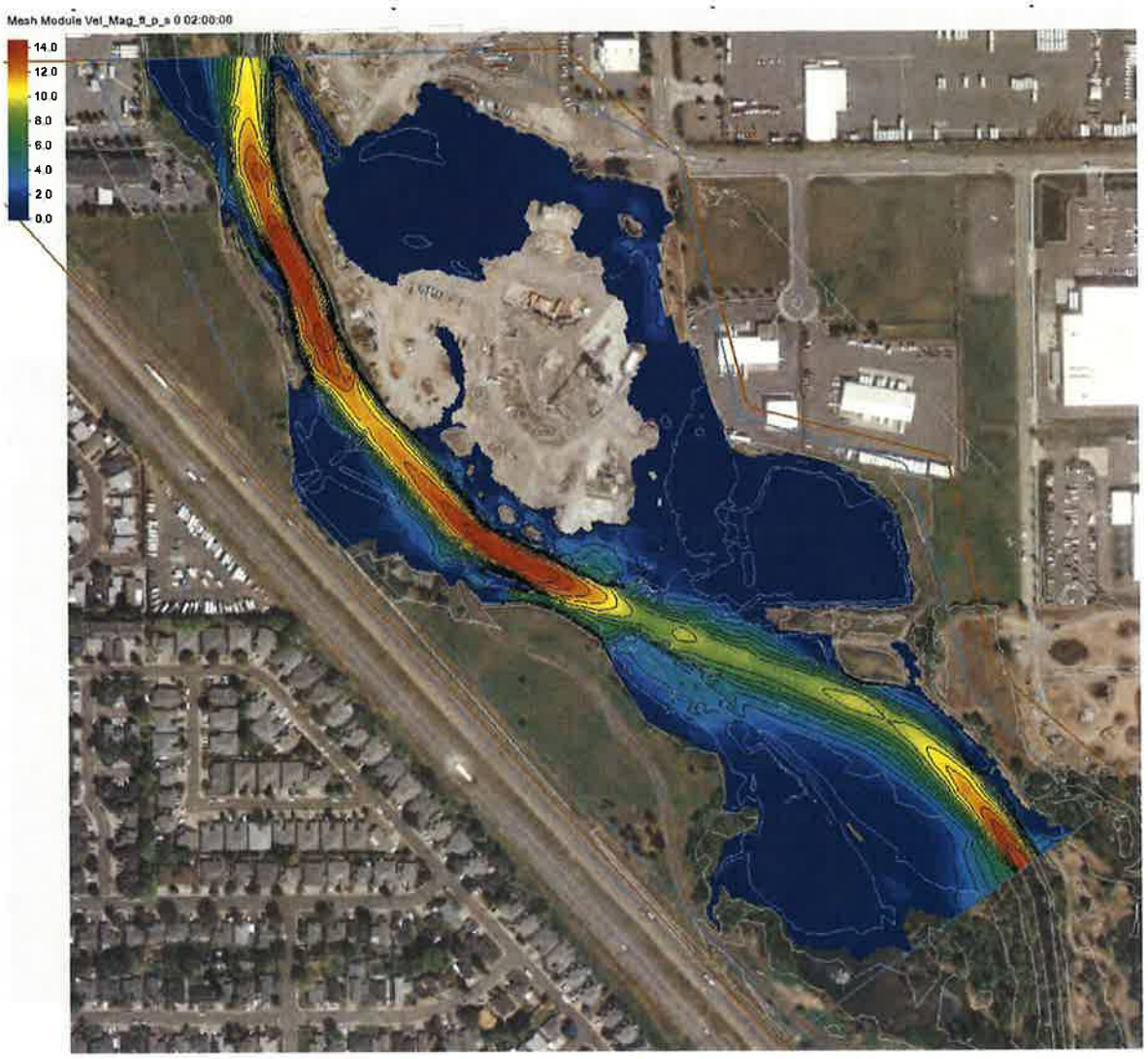


FIGURE 4. EXISTING CONDITIONS VELOCITY CONTOUR MAP - 20500 CFS

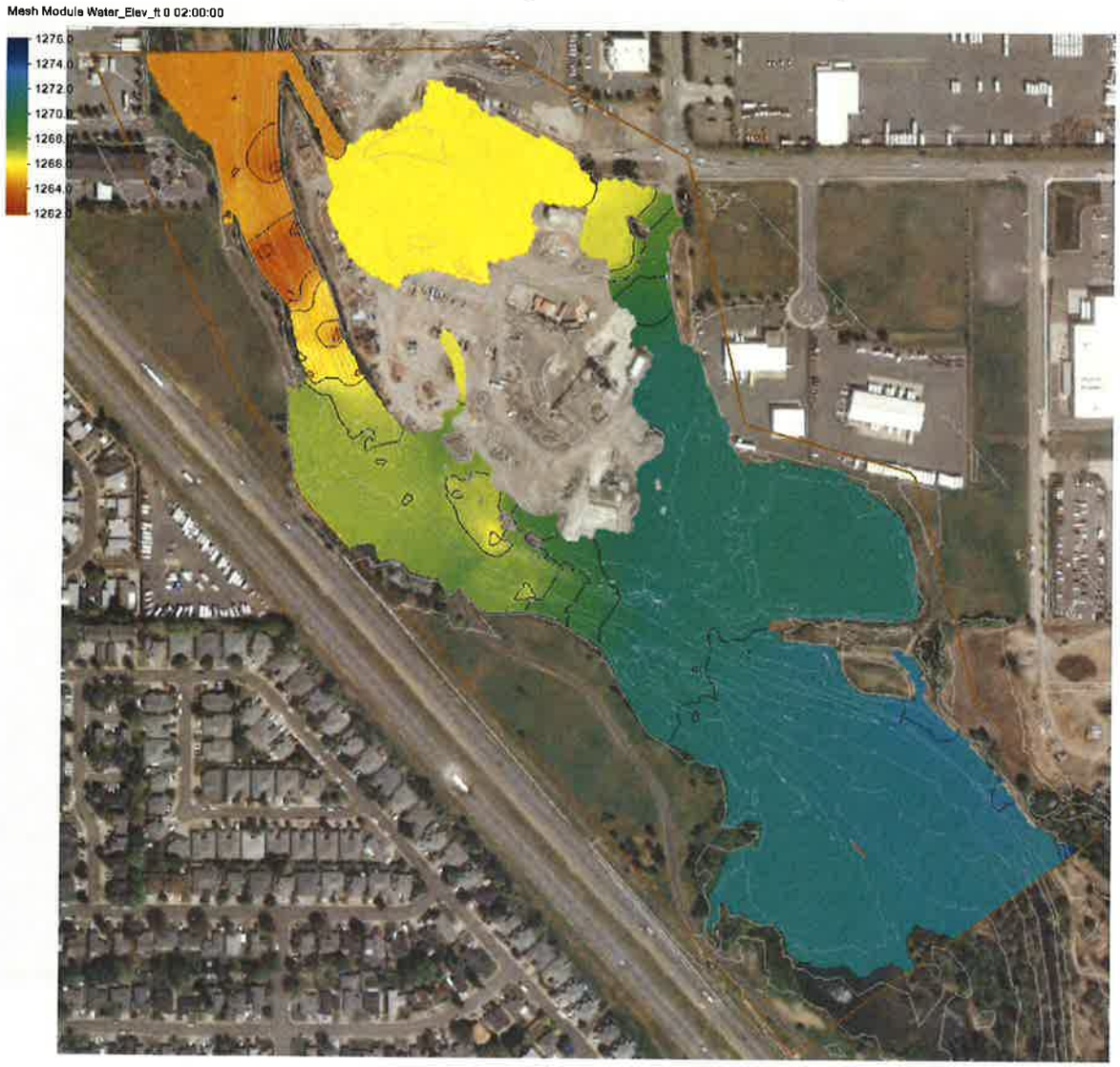


FIGURE 5. PROPOSED WATER SURFACE ELEVATION MAP - 20500 CFS

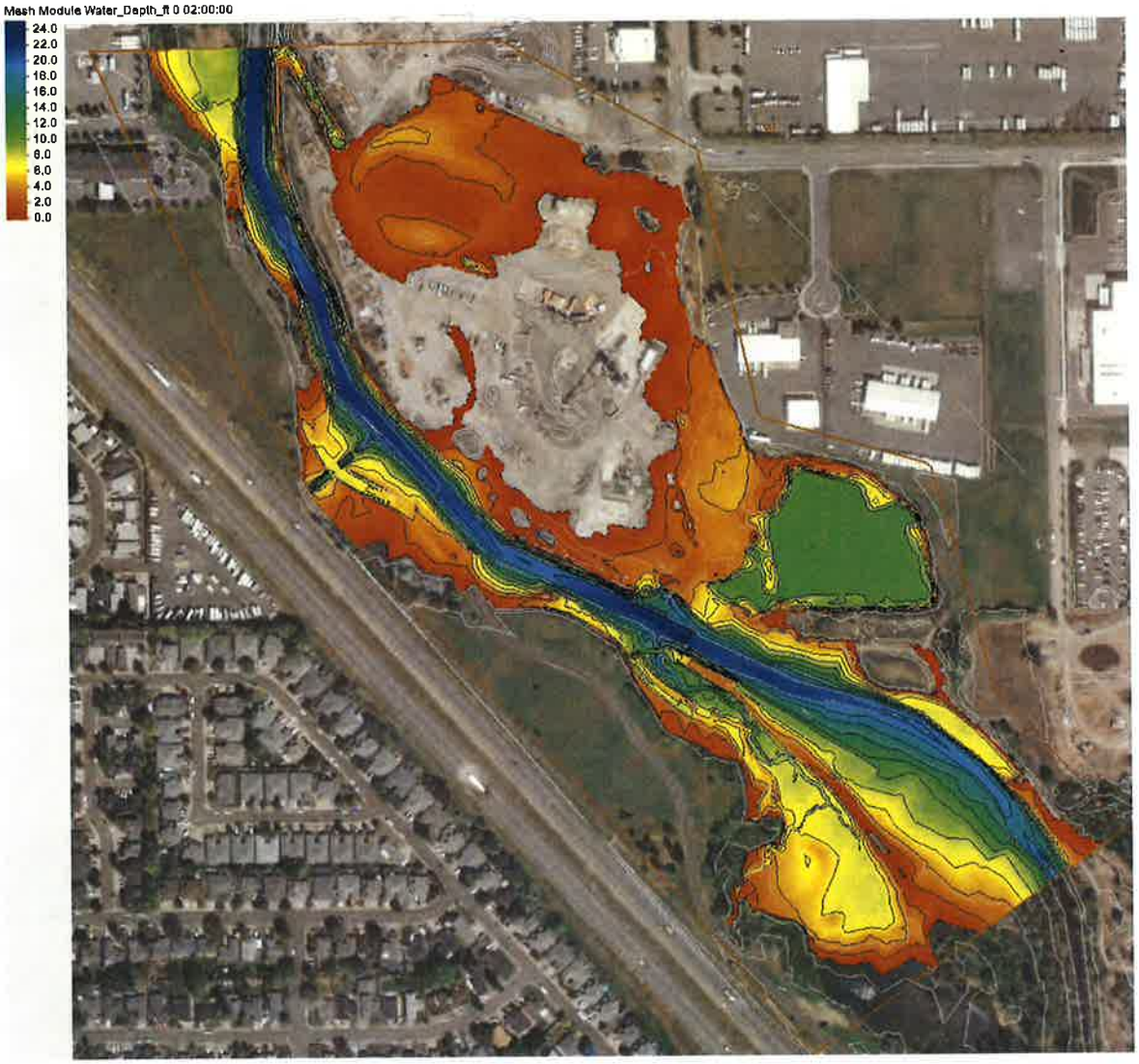


FIGURE 6. PROPOSED CONDITIONS DEPTH CONTOUR MAP - 20500 CFS

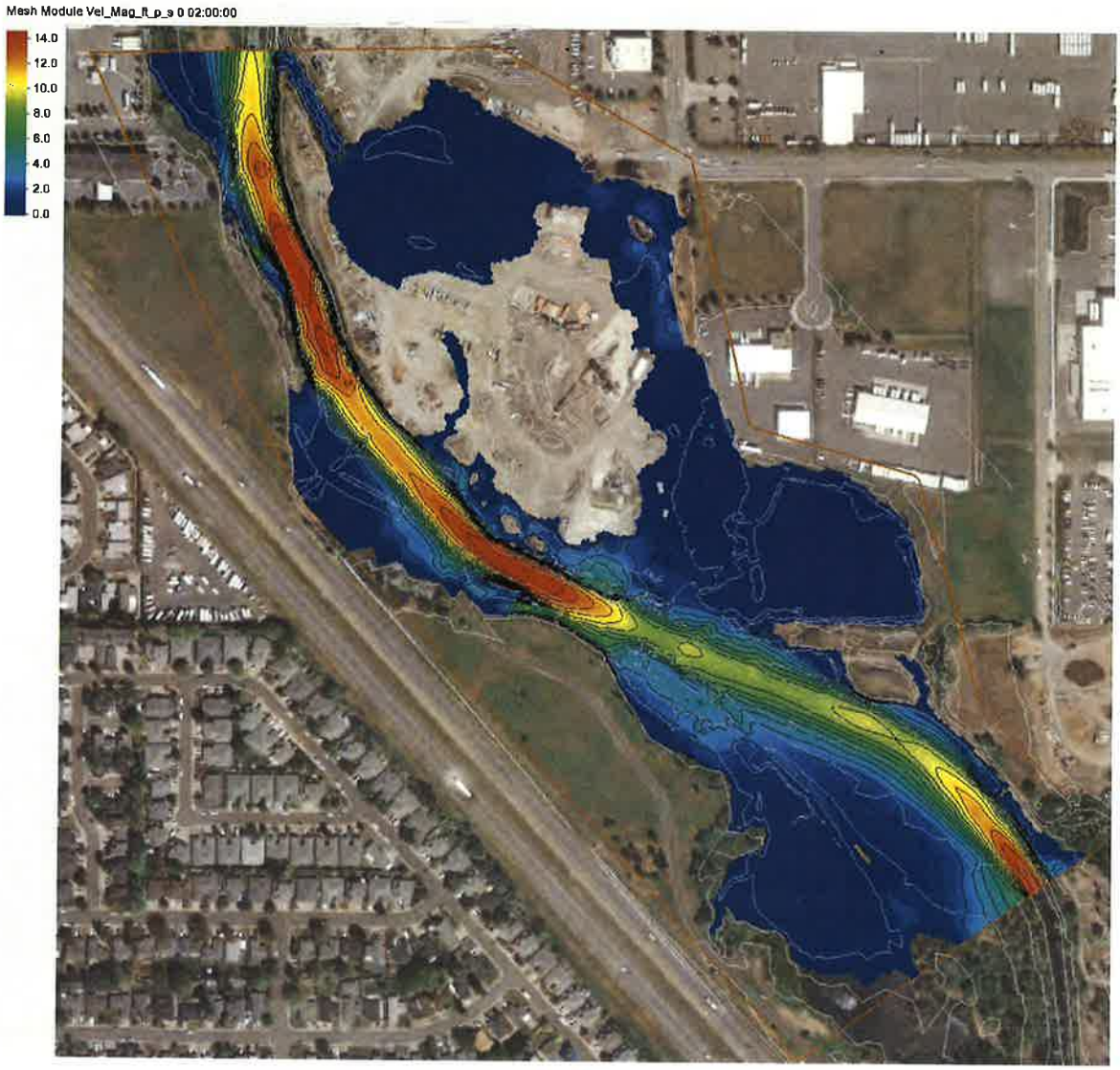


FIGURE 7. PROPOSED CONDITIONS VELOCITY CONTOUR MAP - 20500 CFS

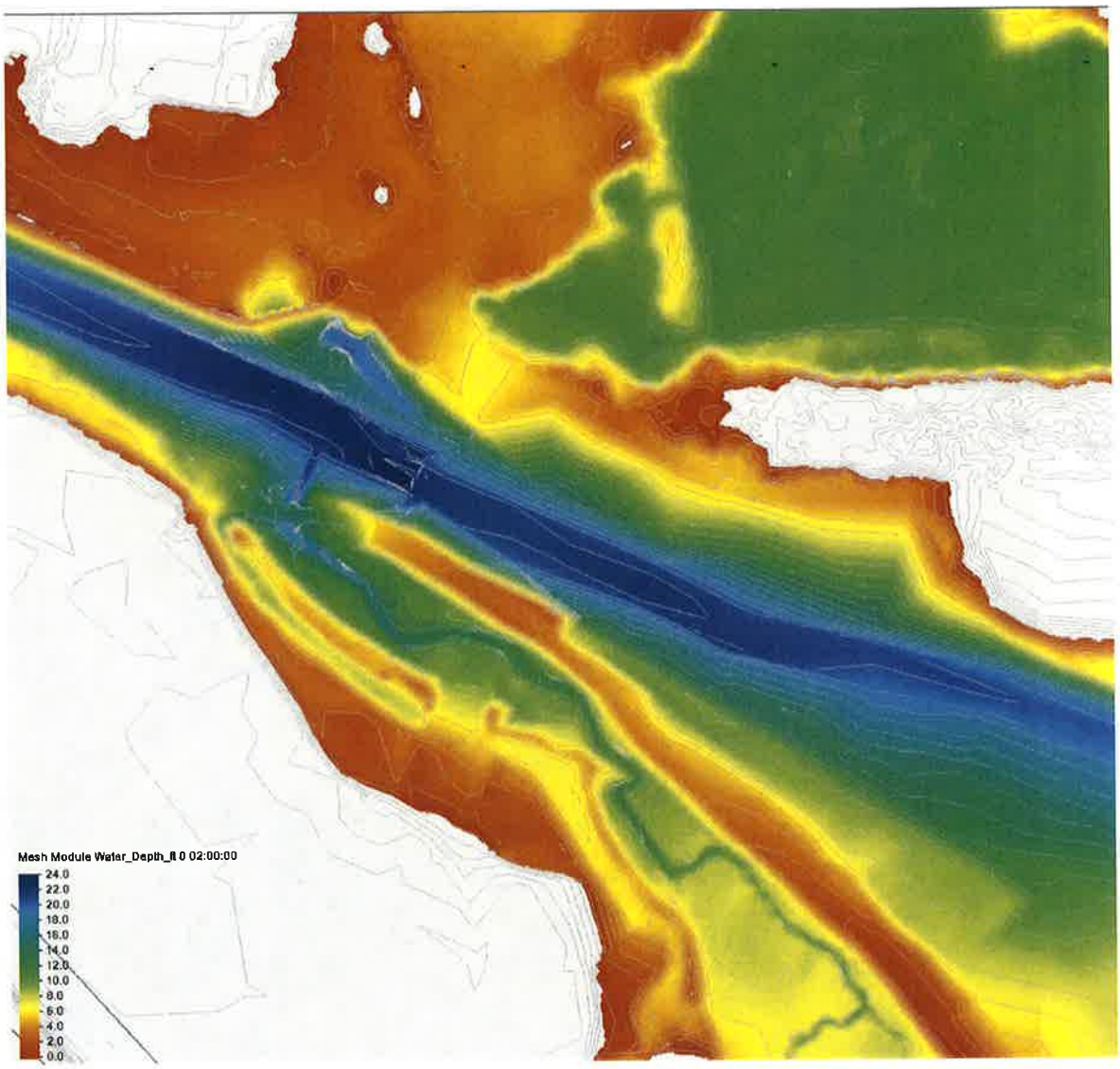


FIGURE 8. EXISTING CONDITIONS WATER DEPTH

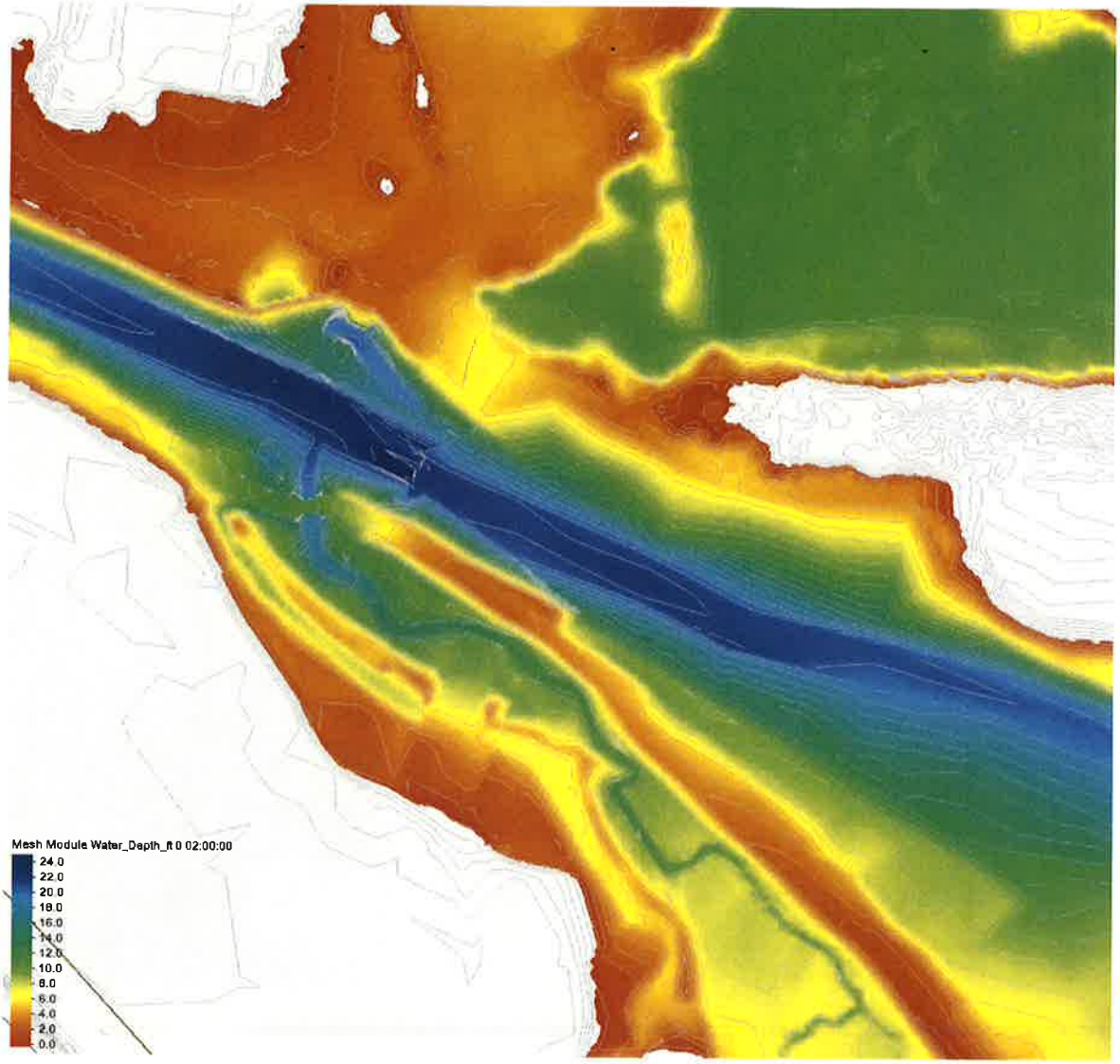


FIGURE 9. PROPOSED CONDITIONS WATER DEPTH

FIGURE 10. CONTOUR PLOT DIFFERENCE BETWEEN THE PROJECT AND EXISTING CONDITIONS WATER LEVELS

Moderate Flow: 1-Dimensional Model Development

Elk Creek near the road crossing is influenced by water levels in Bear Creek. Cascade developed flow scenarios using a 1-dimensional hydraulic model to investigate these impacts for flows ranging from 1000 cfs to 5000 cfs in Bear Creek and a flow of 264.1 cfs in Elk Creek, Central Point's 10 AEP peak flow estimate for Elk Creek. Figures 11 and 12 show the model domain near the project area. Figures 13 and 14 show water surface profile along Elk Creek. Model results show the existing culvert capacity is insufficient to convey the Elk Creek 10 AEP flow regardless of water levels in Bear Creek. The proposed culvert will convey the Elk Creek 10 AEP without overtopping when Bear Creek flows are 3000 cfs or less. For both existing and project conditions, Bear Creek backwaters into Elk Creek at flows of 5000 cfs and greater. During these flows, the culvert crossing has little impact on water levels in Bear or Elk Creeks.

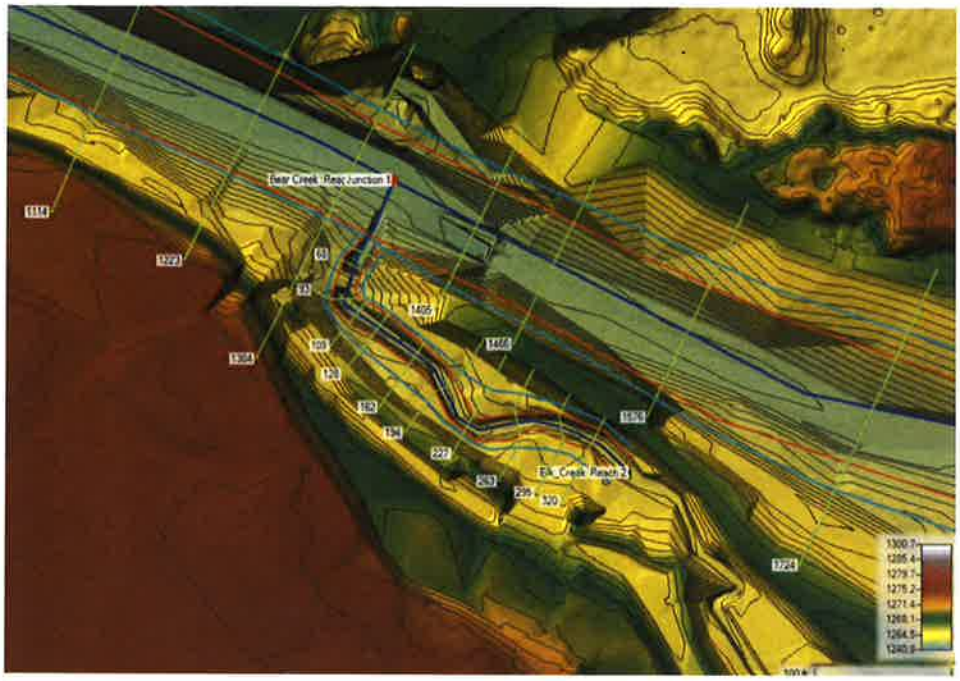


FIGURE 11. EXISTING CONDITIONS MODEL NEAR PROJECT AREA

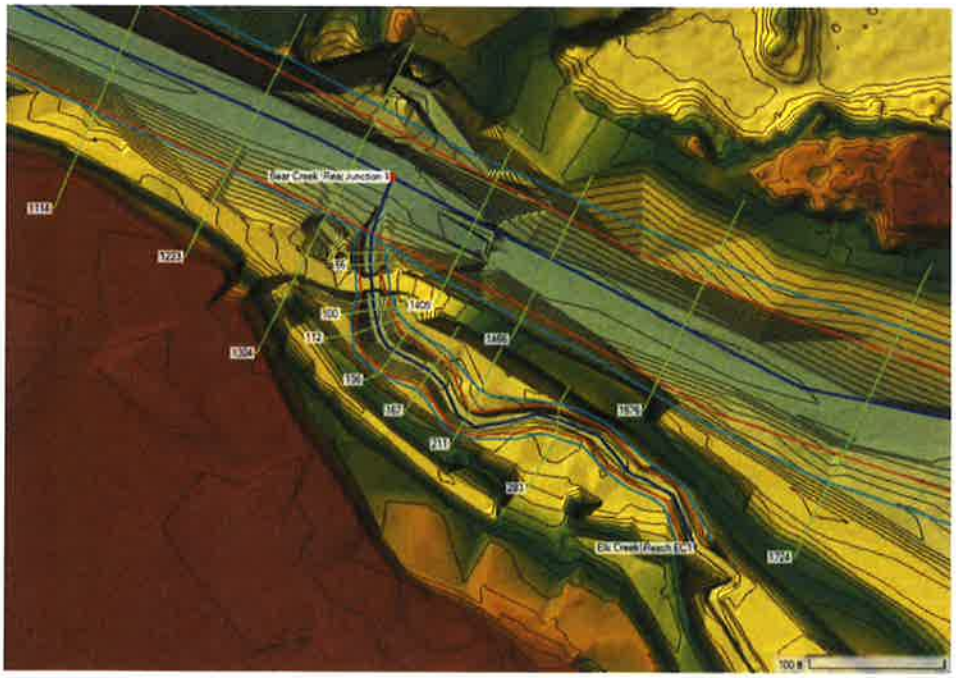


FIGURE 12. PROJECT CONDITIONS MODEL NEAR PROJECT AREA

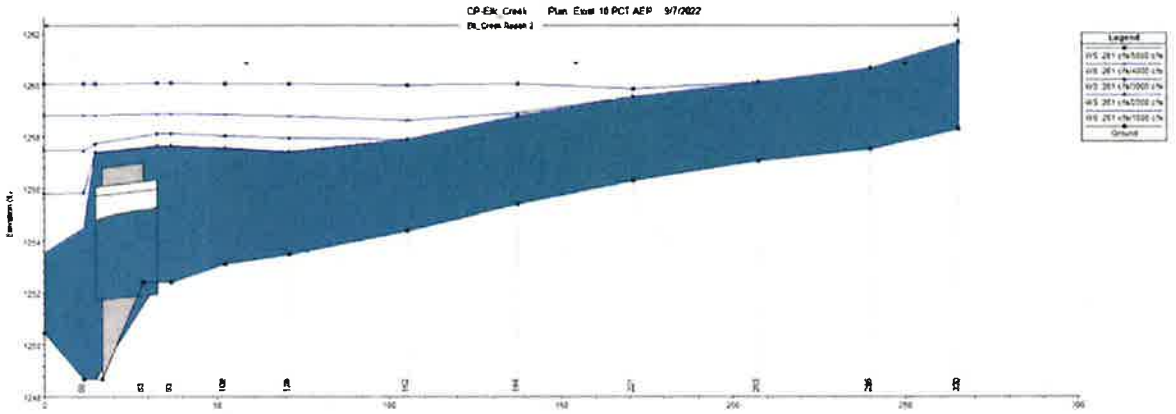


FIGURE 13. EXISTING CONDITIONS ELK CREEK PROFILE

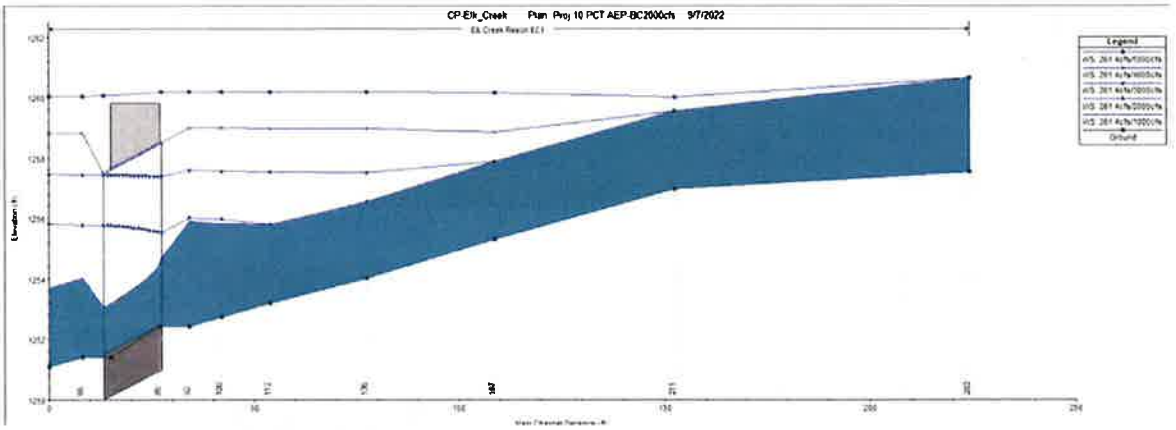


FIGURE 14. PROJECT CONDITIONS ELK CREEK PROFILE

SUMMARY

Based on Cascade's analysis, model results illustrate the crossing at Elk Creek has no impact on flood flows in Bear Creek when Bear Creek flows exceed about 5000 cfs. At FEMA's estimate of the 1 AEP of 20500 cfs, the culvert crossing has no impact on base flood elevations. For these reasons, Cascade believes this project does not adversely impact water levels. This letter conveys assurance that the proposed project to enhance fisheries as analyzed by Cascade keep any rise in the 100-year flood level as close to zero as practicable given the enhancement project goals. As a result, rise affects are localized and do not encroach upon insurable structures.

If you have questions or need further assistance please do not hesitate to contact Joey Howard at Cascade Stream Solution, telephone 541-864-0492.

Attachment A: Preliminary Design Plans

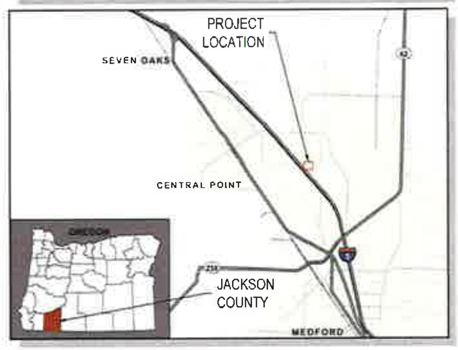
CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

PRELIMINARY REVIEW DRAWINGS

SUMMER 2022

SITE ACCESS MAP

PROJECT VICINITY MAP



DRAWING INDEX

SHEET NO.	SHEET TITLE	DWG NO.
1	COVER	COV
2	GENERAL NOTES	C01
3	DEMOLITION PLAN	C01
4	PROPOSED SITE PLAN	C02
	GRADING PLAN (TO BE PROVIDED IN SUBSEQUENT SUBMITTAL)	
5	PROPOSED STREAMBED SECTIONS	C03
6	DETAILS - SHEET 1 OF 4	D01
7	DETAILS - SHEET 2 OF 4	D02
8	DETAILS - SHEET 3 OF 4	D03
9	DETAILS - SHEET 4 OF 4	D04

REPORT SPILLS

ATTENTION: OREGON LAW REQUIRES THAT SPILLS BE REPORTED TO THE FOLLOWING ENTITIES

OREGON EMERGENCY RESPONSE SYSTEM: 1-800-452-0311
THE NATIONAL RESPONSE CENTER: 1-800-424-8802

CALL 48 HOURS BEFORE YOU DIG ONE CALL 811

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER AT 503-232-1978

CONTACT PERSONNEL

CONTACT	AGENCY	PHONE
GREG GRAVES	CITY OF CENTRAL POINT	(541) 664-3321 x225
TYLER DUNCAN, P.E.	RH2 ENGINEERING	(541) 326-4448
NICK BAKKE	RVSS	(541) 727-6874
ERIC CHASE	SPECTRUM	(541) 210-0827
RYLAN WOOD	PACIFIC POWER	(541) 858-3204
ELI HABERMAN	AVISTA	(541) 690-0901
CAMERON DIBETTA	LUMEN	(541) 324-0549

LEGEND

EXISTING LEGEND	PROPOSED LEGEND
MAJOR CONTOUR	MAJOR CONTOUR
MINOR CONTOUR	MINOR CONTOUR
TOPO EDGE OF ORDINARY HIGH WATER	TOPO EDGE OF ORDINARY HIGH WATER
TOPO TOE OF SLOPE	TOPO TOE OF SLOPE
TOPO TOP OF SLOPE	TOPO TOP OF SLOPE
TREE (DECIDUOUS)	GRAVEL ROADWAY
TREE (TO BE REMOVED)	WILLOW PLUG PLANTINGS
NATURAL GAS VALVE	NATIVE SEED MIX
DIRT ROADWAY	CONCRETE
GRAVEL ROADWAY	STORM DRAIN
LANDSCAPING (SOD, PLANTINGS)	STORM DRAIN CATCH BASIN
WATER BODY	ACCESS ROUTE
CLEAR AND GRUB AREA	ROOT WAD
OBJECT TO BE REMOVED	

SECTION AND DETAIL REFERENCES

THE FOLLOWING CONVENTIONS HAVE BEEN USED WITHIN THESE DRAWINGS TO REFER THE READER BETWEEN THE SECTION/DETAIL AND THE PLAN FROM WHICH IT IS REFERENCED.

REFERENCE BUBBLES

(X / X000) PLAN REFERENCE BUBBLE - REFERS READER BACK TO THE PLAN FROM WHICH THE DETAIL OR SECTION ORIGINATED.

(X / X000) DETAIL/SECTION REFERENCE BUBBLE - REFERS READER TO THE DRAWING ON WHICH THE DETAIL OR SECTION IS LOCATED.

WHERE, ID = SECTION/DETAIL REFERENCE NUMBER
= DRAWING NUMBER ON WHICH DETAIL ORIGINATED OR RESIDES.

SECTION/DETAIL REFERENCE NUMBER CONVENTIONS:
SECTIONS OR ELEVATIONS SHOULD HAVE A LETTER REFERENCE NUMBER (A THROUGH ZZ)

PRELIMINARY

RH2

Sep. 6, 2022
BCG-P-COV.DWG

GENERAL NOTES

PROJECT INFORMATION

PROJECT SITE:
APPROXIMATELY 550 FEET WEST OF NORTHBOUND I-5 MILE MARKER 32 IN CENTRAL POINT, OREGON.
LAT: 42°22'16.25"N
LON: 122°53'35.76"W

OWNER:
CITY OF CENTRAL POINT
CITY OF CENTRAL POINT PUBLIC WORKS DEPARTMENT
140 S 3RD STREET, CENTRAL POINT, OR 97502

ENGINEER:
RH2 ENGINEERING, INC.
3553 ARROWHEAD DR. STE. 200, MEDFORD OR 97504

CRITERIA

1. CONSTRUCTION OF ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CITY OF CENTRAL POINT STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS, AND THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION, AS ISSUED BY THE OREGON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION.
2. ALL BUILDING MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION SHALL CONFORM TO THESE DRAWINGS, SPECIFICATIONS, AND OREGON SPECIALTY CODES, LATEST EDITION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL APPLICABLE PERMITS AND APPROVALS ISSUED BY THE CITY OF CENTRAL POINT AND OTHER REGULATORY AUTHORITIES FOR THIS PROJECT.

REFERENCES

1. SURVEY: A TOPOGRAPHICAL SURVEY WAS PREPARED FOR THIS PROJECT BY PARIANI SURVEYING, LLC. SEE SURVEY INFORMATION THIS SHEET.
2. GEOTECHNICAL: NO GEOTECHNICAL REPORT OR INVESTIGATIONS WERE MADE IN CONJUNCTION WITH THIS PROJECT. ANY REFERENCES TO GEOLOGIC CONDITIONS ARE BASED ON FIELD OBSERVATIONS BY THE ENGINEER. ONSITE SOILS ARE COBBLY SANDS WITH SOME FINES, TYPICAL OF NATIVE STREAMBED MATERIAL IN THE ROGUE VALLEY, UNDERLAID BY HARDPAN.
3. WETLAND DELINEATION REPORT: A WETLAND DELINEATION REPORT WAS PREPARED FOR THIS PROJECT BY RABE CONSULTING.
4. PERMITS: CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION. PERMITS OBTAINED BY THE CITY INCLUDE:
   - 4.1. CITY OF CENTRAL POINT FLOODPLAIN DEVELOPMENT PERMIT
   - 4.2. UNITED STATES ARMY CORPS OF ENGINEERS AND OREGON DEPARTMENT OF STATE LANDS JOINT FILL-REMOVAL PERMIT
   - 4.3. OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY SECTION 401 WATER QUALITY PERMIT
   - 4.4. OREGON DEPARTMENT OF FISH AND WILDLIFE FISH SALVAGE PERMIT

GENERAL CONSTRUCTION

1. A COPY OF THE APPROVED PLANS AND SPECIFICATIONS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
2. IN THE EVENT THAT STANDARD CONSTRUCTION NOTES ARE FOUND TO BE IN CONFLICT WITH PROJECT SPECIFIC NOTES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WHERE CONFLICTS ARISE, THE CONTRACTOR SHALL ASSUME THAT THE THE MORE RESTRICTIVE CONDITION SHALL APPLY.
3. THE CITY PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED AT LEAST 2 WORKING DAYS PRIOR TO COMMENCING ANY PROJECT CONSTRUCTION.
4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE PRE-QUALIFIED, SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED.
6. REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY RH2 ENGINEERING, INC. BEFORE CHANGES ARE IMPLEMENTED.
7. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 757.541 TO 757.571, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HAND-EXPOSE (POTHOLE) UNDERGROUND FACILITIES AND USE REASONABLE CARE TO AVOID DAMAGING THEM.
8. GRANULAR MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE CITY OF CENTRAL POINT. THE CONTRACTOR SHALL NOTIFY THE CITY OF THE MATERIAL SOURCE PRIOR TO ANY GRANULAR MATERIAL PLACEMENT AND SHALL NOT CHANGE MATERIAL SOURCE WITHOUT APPROVAL.
9. ALL CONCRETE SHALL BE 3500 PSI AT 28 DAYS UNLESS OTHERWISE SPECIFIED.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
2. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM ADVANCE NOTIFICATION TO THE OWNER, ENGINEER, AND ALL AFFECTED UTILITY COMPANIES PRIOR TO ACTUAL START OF WORK.
3. CONSTRUCTION STAKING SHALL BE PERFORMED A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION BY A SURVEYOR HOLDING A VALID PROFESSIONAL LAND SURVEYING LICENSE ISSUED BY THE STATE OF OREGON.
4. PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED LOCAL, STATE, OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL.
5. UNLESS OTHERWISE NOTED, ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED.
6. AN AS-BUILT SURVEY OF THE PROJECT SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION.

SITE

1. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER AND ADJACENT PROPERTY OWNERS FOR ACCESS THROUGH AND STORAGE OF MATERIALS AND EQUIPMENT.
2. DO NOT DISTURB ANY AREAS OUTSIDE OF CONSTRUCTION LIMITS.
3. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING INTEGRITY AND SECURITY OF SITE TO DISCOURAGE ACCESS BY UNAUTHORIZED PERSONNEL.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EXISTING OR BETTER CONDITION UNLESS OTHERWISE STATED ON THE PLANS.

SITE (CONTINUED)

5. ALL VEHICLES ARE TO BE CLEANED OF ALL EXCESS CONCRETE AND DIRT PRIOR TO LEAVING THE SITE. PROTECT ALL ROADS FROM DAMAGE OR SEDIMENT TRANSPORT DURING CONSTRUCTION. ANY DAMAGE OR CLEANUP SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE AND BE COMPLETED TO THE SATISFACTION OF THE OWNER.
6. THE CONTRACTOR SHALL CLEANUP ALL AREAS AFFECTED BY HIS ACTIVITIES TO THE SATISFACTION OF THE OWNER BY THE END OF EACH WORKING DAY OR MORE FREQUENTLY IF REQUIRED BY THE OWNER. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, ASPHALT DEBRIS, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY CONSTRUCTION ACTIVITIES. FAILURE TO CLEANUP TO THE SATISFACTION OF THE OWNER WILL NECESSITATE A SHUTDOWN OF THE PROJECT UNTIL CLEANUP IS PROPERLY PERFORMED. DAILY CLEANUP IS AN INTEGRAL PART OF EROSION AND POLLUTION CONTROL.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEETING ALL DISPOSAL REQUIREMENTS INCLUDING OFF SITE DISPOSAL OF WASTE MATERIAL AT APPROVED SITES.
8. PLACEMENT OR STORAGE OF SPOILS IS NOT PERMITTED ON HARD SURFACE STREETS OR BIKE PATHS WITHIN PUBLIC RIGHT-OF-WAY. SPOILS STORED IN OTHER RIGHT-OF-WAY AREAS SHALL BE COVERED TO PREVENT EROSION.
9. BARE EARTH AREAS SHALL BE SEEDED WITH AN APPROVED NATIVE SEED MIX, REFER TO PLANTING PLAN AND THE SPECIFICATIONS.
10. ALL IN-WATER WORK SHALL BE CONDUCTED WITHIN THE IN-WATER WORK PERIOD, WHICH IS JUNE 15TH THROUGH SEPTEMBER 15TH.

UTILITIES

1. UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON AS-BUILT FIELD LOCATION OF EXISTING STRUCTURES. OTHER UTILITIES OR DEVIATIONS FROM THESE PLANS MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO CONSTRUCTION FOR VERIFICATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF ANY EARTHWORK OR OTHER ACTIVITIES WHICH COULD POTENTIALLY DAMAGE EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER AT AND THE CITY OF CENTRAL POINT PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY AND THE UTILITY COMPANY WHEN A CONFLICT OCCURS OR WHEN A CONFLICT IS ANTICIPATED.
2. PLANS SHOW UTILITY LOCATIONS AS THEY WERE MARKED OR OBSERVED AT THE TIME OF SURVEY. SOME UTILITIES ARE TO BE RELOCATED BY THE ASSOCIATED UTILITY, AND OTHERS ARE TO BE RELOCATED BY THE CONTRACTOR. LOCATIONS WHERE UTILITIES ARE TO BE RELOCATED BY THE ASSOCIATED UTILITY ARE SPECIFICALLY NOTED ON THE PLANS.
3. OVERHEAD UTILITIES: NOT ALL OVERHEAD UTILITIES MAY BE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO INDEPENDENTLY VERIFY ALL OVERHEAD UTILITIES. THE CONTRACTOR SHALL ACCOUNT FOR ACCOMMODATING ALL OVERHEAD UTILITIES IN THEIR BID AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR FACILITATING OVERHEAD UTILITIES.
4. EXISTING WATER AND POWER FACILITIES MAY NOT BE SHUT DOWN FOR ANY PERIOD WITHOUT PRIOR APPROVAL FROM OWNER. A MINIMUM OF ONE WEEK NOTICE TO THE OWNER IS REQUIRED FOR ANY SHUT DOWN. THE CONTRACTOR SHALL NOT OPERATE EXISTING WATER, SEWER, OR POWER SYSTEM EQUIPMENT (VALVES, SWITCHES, ETC.)
5. THE CONTRACTOR SHALL NOTIFY FRANCHISE OFFICIAL, A MINIMUM OF 48 HOURS IN ADVANCE OF ANY PLANNED DISRUPTION TO UTILITIES INCLUDING, BUT NOT LIMITED TO WATER, SEWER, NATURAL GAS, IRRIGATION, TELEPHONE, POWER, CABLE AND FIBER OPTICS.
6. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH THE OREGON DEPARTMENT OF TRANSPORTATION AND UTILITY FRANCHISE STANDARDS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES AND SHALL PROVIDE SHORING AND SUPPORT AS NECESSARY.
8. CUT-INS AND LIVE TAPS SHALL BE DIRECTLY SUPERVISED BY AN AUTHORIZED REPRESENTATIVE OF THE OWNER. PARTS MUST BE ON-SITE AND APPROVED BY OWNER AUTHORIZED REPRESENTATIVE PRIOR TO SCHEDULING CUT-INS OR CONNECTIONS.
9. AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM HORIZONTAL CLEARANCE BETWEEN THE CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.

DEMOLITION NOTES

1. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL REMOVE ALL COMPONENTS SHOWN TO BE DEMOLISHED IN THEIR ENTIRETY, AND SHALL PROPERLY DISPOSE OF ALL REMOVED ITEMS.
3. CONTRACTOR SHALL INSTALL STREAM DIVERSION SYSTEM AND ALL NECESSARY TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO COMMENCING ANY GRUBBING, EARTHWORK, OR OTHER WORK THAT COULD RELEASE SEDIMENT INTO WATERWAYS.

TRAFFIC CONTROL

1. THE CONTRACTOR SHALL PREPARE A WRITTEN AND DRAWN TCP WHICH SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE IN ACCORDANCE WITH SECTION 00225 OF THE STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL SAFEGUARD THE PERSONS AND PROPERTY OF THE TRAVELING PUBLIC. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ERECTING AND MAINTAINING TRAFFIC CONTROL THROUGHOUT THE PROJECT DURATION IN ACCORDANCE WITH THE APPROVED TCP. ALL TRAFFIC CONTROL DEVICES SHALL MEET MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS.
3. CONTRACTOR SHALL PROVIDE FOR EMERGENCY VEHICLE ACCESS TO ALL PROPERTIES ADJACENT TO THE PROJECT SITE AT ALL TIMES.
4. WHEN CONSTRUCTION ACTIVITIES BLOCK OR INTERFERE WITH NORMAL PEDESTRIAN AND BICYCLIST ROUTING, PROVIDE SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS EITHER THROUGH THE CONSTRUCTION, OR REROUTED AROUND THE CONSTRUCTION, UTILIZING ODOT STANDARD DRAWING TM844 AND THE REQUIREMENTS OF SUBSECTION 00220.02(B) OF THE STANDARD SPECIFICATIONS.

GENERAL TESC

1. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE EROSION CONTROL STANDARDS AND IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF TESC FACILITIES AS REQUIRED TO PREVENT EROSION UNTIL ALL CONSTRUCTION IS APPROVED.
2. IN THE EVENT OF ANY EROSION CONTROL MEASURE FAILURE, IMMEDIATE ACTION SHALL BE TAKEN TO REPAIR, REPLACE, OR IMPLEMENT ADDITIONAL MEASURES AS REQUIRED TO ENSURE ADEQUATE EROSION CONTROL PROTECTION.
3. ANY DISCHARGE OF SEDIMENT-LADEN RUN-OFF OR OTHER POLLUTANTS TO WATERS OF THE STATE IS SUBJECT TO ENFORCEMENT ACTION, THE COST FOR WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL TESC (CONTINUED)

4. DURING CONSTRUCTION, ALL RELEASES OF OILS, HYDRAULIC FLUIDS, FUELS, OTHER PETROLEUM PRODUCTS, PAINTS, SOLVENTS, AND OTHER DELETERIOUS MATERIALS MUST BE CONTAINED AND REMOVED IN A MANNER THAT WILL PREVENT THEIR DISCHARGE TO WATERS AND SOILS. THE CLEANUP OF SPILLS SHALL TAKE PRECEDENCE OVER OTHER WORK ON THE PROJECT. BARRELS, PETROPHILIC PADS, TARPS, AND OTHER EQUIPMENT NECESSARY FOR CAPTURING, CONTROLLING, AND DISPOSING OF HAZARDOUS FLUIDS SHALL BE AVAILABLE ON-SITE AT ALL TIMES.
5. PROPER EROSION AND SEDIMENT CONTROL PRACTICES MUST BE USED ON THE CONSTRUCTION SITE AND ADJACENT AREAS TO PREVENT SEDIMENTS FROM ENTERING THE NATURAL DRAINAGE SYSTEM. ALL SURFACE AREAS DISTURBED AND ANY EMBANKMENTS OR EXCAVATIONS CREATED BY CONSTRUCTION ACTIVITIES MUST BE REVEGETATED OR PROVIDED AN EQUIVALENT TYPE OF PROTECTION AGAINST EROSION.
6. OWNER REPRESENTATIVES MAY DIRECT MAINTENANCE AND REPAIR OF TESC MEASURES AND/OR FACILITIES AS THE HIGHEST PRIORITY WORK AT ANY TIME THE TESC MEASURES AND/OR FACILITIES DO NOT MEET THE PERMIT, CITY, OR PLAN REQUIREMENTS.
7. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SWEEP TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE OWNER'S REPRESENTATIVE. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL.
8. DURING THE CONSTRUCTION PERIOD, THE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY THE ENGINEER, OWNER, OR REGULATORY AGENCY. THE CONTRACTOR SHALL BE COGNIZANT OF FUTURE WEATHER PATTERNS AND PLAN ACCORDINGLY.
9. CLEARING AND GRUBBING WHERE REQUIRED SHALL BE PERFORMED WITHIN THE CONSTRUCTION AREAS SHOWN ON THE PLANS. DEBRIS RESULTING FROM THE CLEARING AND GRUBBING SHALL BE DISPOSED OF BY THE CONTRACTOR AND IN ACCORDANCE WITH THE TERMS OF ALL APPLICABLE PERMITS.
10. THE CONTRACTOR SHALL FENCE ALL VEGETATION TO BE RETAINED ON SITE TO THE DRIPLINE FOR TREES OR OUTER VEGETATION EDGE FOR SHRUBS. FENCING SHALL BE HIGH-VISIBILITY CONSTRUCTION FENCE TO BE RETAINED FOR THE DURATION OF THE CONSTRUCTION.
11. TESC MATERIALS ON HAND – THE CONTRACTOR SHALL KEEP A SUFFICIENT SUPPLY OF TESC MATERIALS ON HAND TO REMEDY ANY FAILURE OF TESC BMPS THAT IS DETRIMENTAL TO DOWNSTREAM OR ADJACENT DRAINAGE DITCHES, CONVEYANCE SYSTEMS, OR OTHER PROPERTIES. THESE MATERIALS INCLUDE, BUT ARE NOT LIMITED TO: SANDBAGS, SILT FENCE, EROSION CONTROL BLANKET, ROCK, STRAW OR MULCH.
12. THE TESC FACILITIES SHALL BE INSPECTED AT LEAST WEEKLY BY THE CONTRACTOR'S TESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
13. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR FOURTEEN CONSECUTIVE DAYS DURING THE WET SEASON OR THIRTY DAYS DURING THE DRY SEASON SHALL BE STABILIZED WITH THE APPROVED TESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

ABBREVIATIONS

BP	BEGINNING POINT	MAX	MAXIMUM
CONC	CONCRETE	N	NORTHING
CL	CENTERLINE	PI	POINT OF INTERSECTION
DIAM	DIAMETER	PROP	PROPOSED
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	R	RADIUS
E	EASTING	RJ	RESTRAINED JOINT
ELEV	ELEVATION	SPEC	SPECIFICATIONS
EP	ENDING POINT	ST	STORM
EX	EXISTING	STA	STATION
IE	INVERT ELEVATION	STD	STANDARD
L	LENGTH	STL	STEEL
LF	LINEAR FEET	TYP	TYPICAL
MIN	MINIMUM	W	WATER

SURVEY NOTES

1. TOPOGRAPHIC SURVEY WAS PERFORMED BY NEATHAMER SURVEYING INC., WITH FIELD WORK COMPLETED ON FEBRUARY 1, 2022.
2. THE BASIS OF BEARING FOR THIS SURVEY GEODETIC NORTH REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83 2011) USING THE OREGON COORDINATE REFERENCE SYSTEM GRANTS PASS - ASHALND ZONE.
3. THE BASIS OF VERTICAL CONTROL FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) (CITY OF CENTRAL POINT) VIA RTK GPS OBSERVATIONS.
4. THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE AND NOT THE RESULT OF A BOUNDARY SURVEY.

RH2

REGISTERED PROFESSIONAL ENGINEER PRELIMINARY OREGON

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

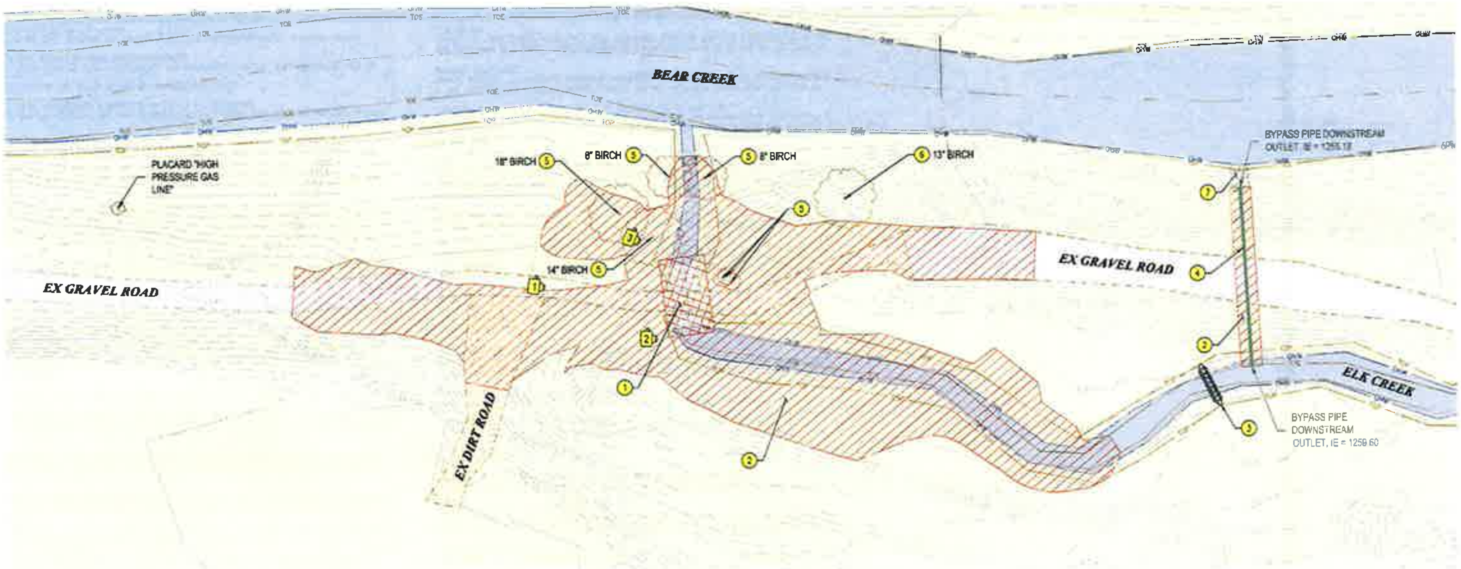
GENERAL NOTES

REVISIONS

PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

G01 | 2 of 3



PLAN VIEW (1 / C02)
1" = 20'

GENERAL NOTES

1. LOCATION OF EX UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE CITY AND UNDERGROUND SERVICES ALERT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXISTING UTILITY LOCATIONS.
2. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL REMOVE ALL COMPONENTS SHOWN TO BE DEMOLISHED IN THEIR ENTIRETY, AND SHALL PROPERLY DISPOSE OF ALL REMOVED ITEMS.

KEY NOTES

1. REMOVE EXISTING CULVERTS AND GUARDRAIL.
2. CLEAR AND GRUB AREA TO LIMITS SHOWN.
3. ODOT TYPE 4 SANDBAG CHECK DAM APPROX 3' HIGH, REFER TO DETAIL RD1005 ON SHEET D04.
4. 12" DIAMETER BY APPROX 80' LONG TEMPORARY BYPASS PIPE INSTALLED 24" ABOVE THALWEG. ALLOW FOR APPROX 1 CFS BYPASS FLOW TO BEAR CREEK.
5. REMOVE EXISTING TREE(S).
6. PROTECT EXISTING TREE(S).
7. 24" WIDE FLAT BOTTOM CHANNEL WITH 1H:1V SIDE SLOPES LINED WITH 12" THICK LAYER OF CLASS 50 RIPRAP FROM PIPE DISCHARGE POINT TO WATERLINE.

CULVERT DEMOLITION (2 / C02)
NOT TO SCALE

CULVERT INLET DEMOLITION (3 / C02)
NOT TO SCALE

CULVERT OUTLET DEMOLITION (4 / C02)
NOT TO SCALE

VICINITY MAP

RH2

REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY — OREGON — EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT
EXISTING & DEMOLITION PLAN

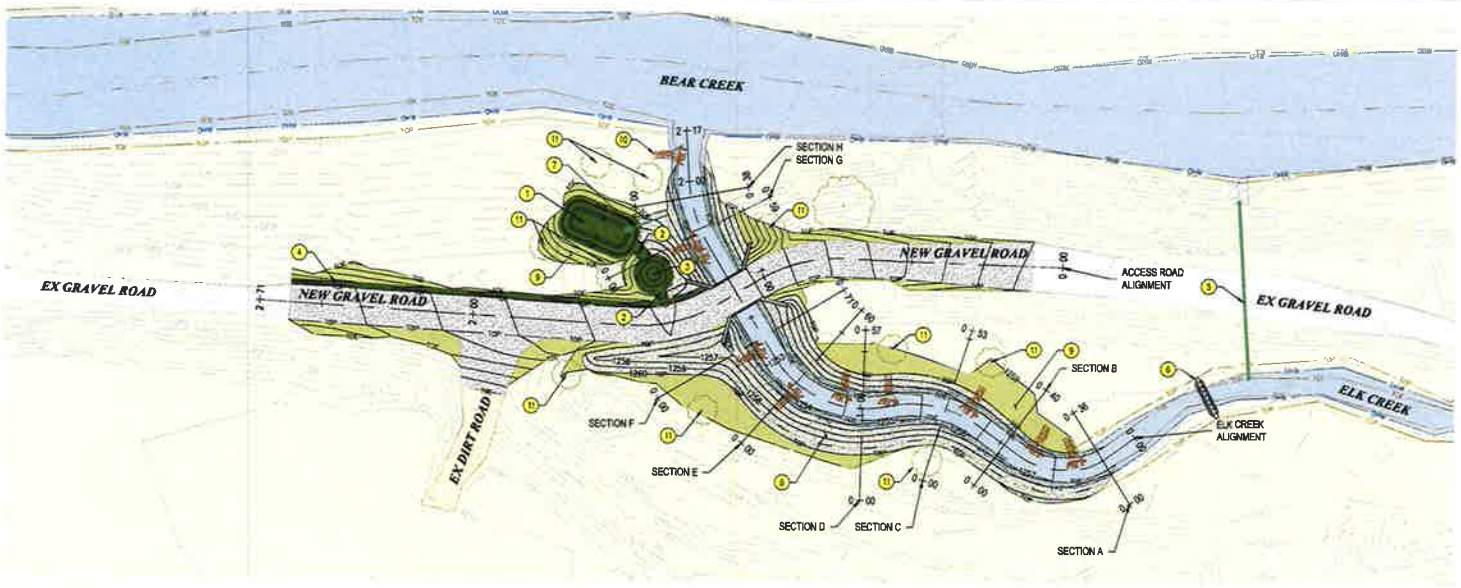
CENTRAL POINT

REVISIONS

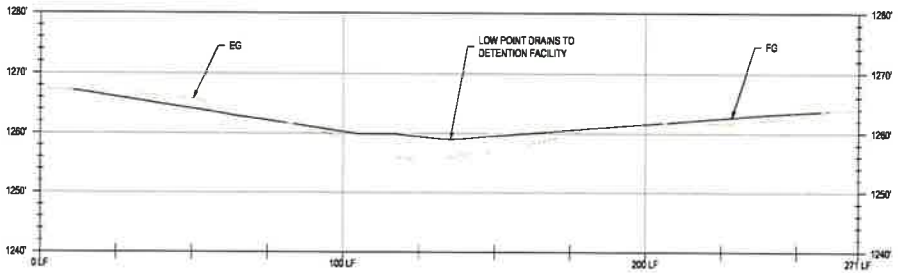
PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

DWG NO. C01 — SHEET NO. 3 / 9



PLAN VIEW
1" = 20'



ROAD ALIGNMENT PROFILE
H: 1" = 20', V: 1" = 10'

GENERAL NOTES

1. LOCATION OF EX UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE CITY AND UNDERGROUND SERVICES ALERT #11 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXISTING UTILITY LOCATIONS.
2. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
3. SEED ALL DISTURBED EARTH AREAS, INCLUDING WILLOW PLANTING AREAS WITH NATIVE SEED MIX. REFER TO PLANTING DETAILS AND NOTES ON SHEET D02.

KEY NOTES

1. DETENTION BASIN
2. CONNECTING CHANNEL
3. FOREBAY
4. CONVEYANCE DITCH
5. BYPASS PIPE TO REMAIN. UPON PROJECT COMPLETION INSTALL PIPE PLUGS AT EACH END AND CLSM AROUND PIPE ENDS.
6. UPON PROJECT COMPLETION AND ACCEPTED STREAMBED STABILIZATION, REMOVE CHECKDAM.
7. FLOW CONTROL STRUCTURE AND 12" DISCHARGE PIPE WITH CHECK VALVE, TIDEFLEX TF-1 OR APPROVED EQUAL, AT OUTLET.
8. INSTALL WILLOW PLUG PLANTINGS ALONG STREAM BANKS, REFER TO PLANTING DETAILS AND NOTES ON SHEET D03.
9. SEED ALL DISTURBED EARTH AREAS, REFER TO PLANTING DETAILS AND NOTES ON SHEET D03.
10. INSTALL ROOT WADS IN STREAM BED AT THE APPROX. LOCATIONS SHOWN. ROOT WADS TO BE OBTAINED FROM EXISTING TREES TO BE REMOVED OR LOCALLY SOURCED, REFER TO SPECIFICATIONS.
11. PLANT OREGON ASH TREES IN APPROX. LOCATIONS SHOWN. REFER TO PLANTING DETAILS AND NOTES ON SHEET D03.

VICINITY MAP

RH2

PRELIMINARY

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

PROPOSED SITE PLAN

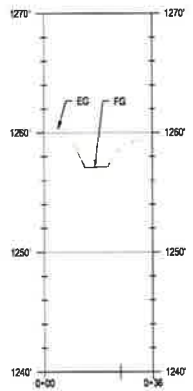
REVISIONS

PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO: C02
SHEET NO: 4 of 9



SECTION A PROFILE
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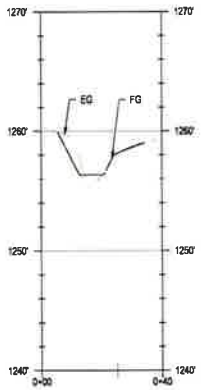

SECTION B PROFILE
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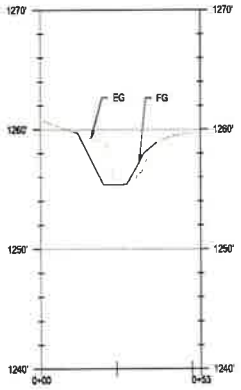

SECTION C PROFILE
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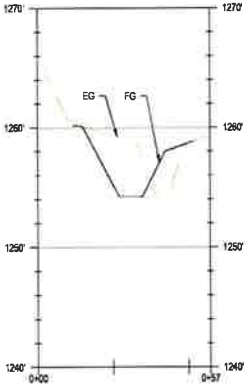

SECTION D PROFILE
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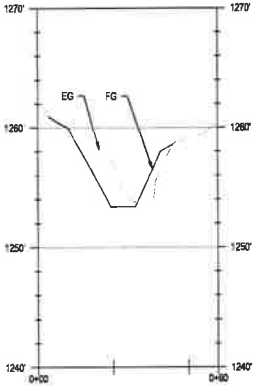

SECTION E PROFILE
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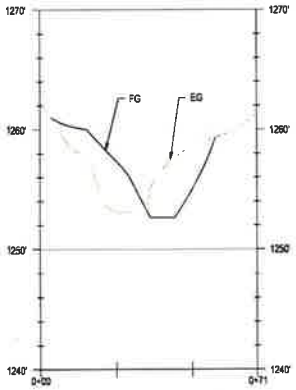

SECTION F PROFILE
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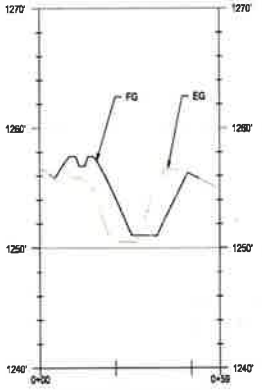

SECTION G PROFILE
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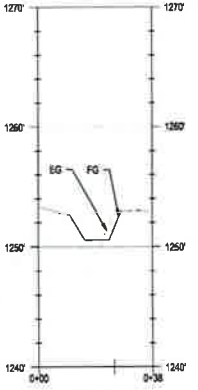

SECTION H PROFILE
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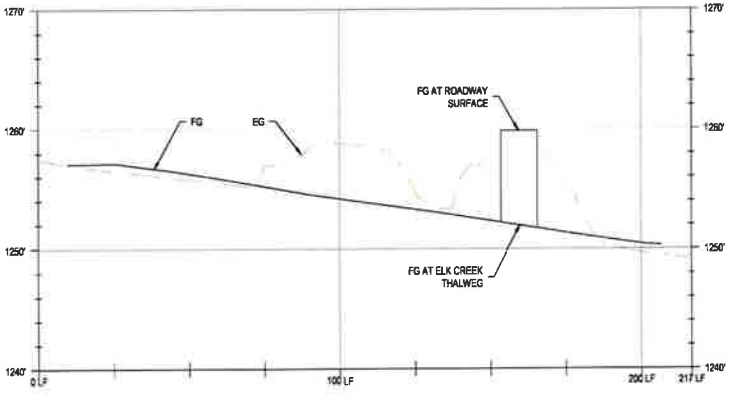


ELK CREEK ALIGNMENT (1) PROFILE
H: 1" = 20', V: 1" = 5'

RH2

PRELIMINARY
EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

PROPOSED STREAMBED SECTIONS

REVISIONS

PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

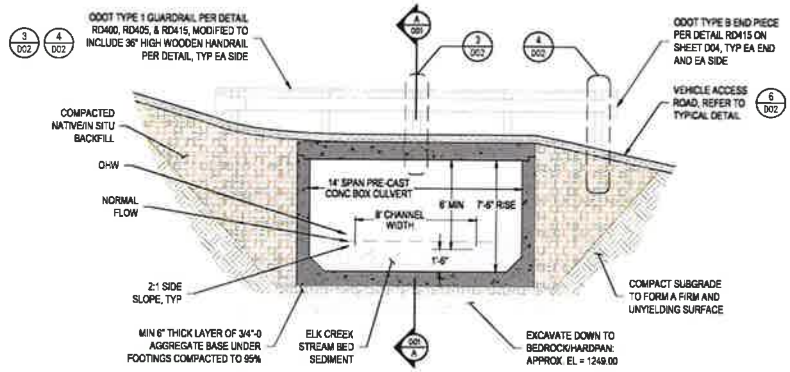
C03

5

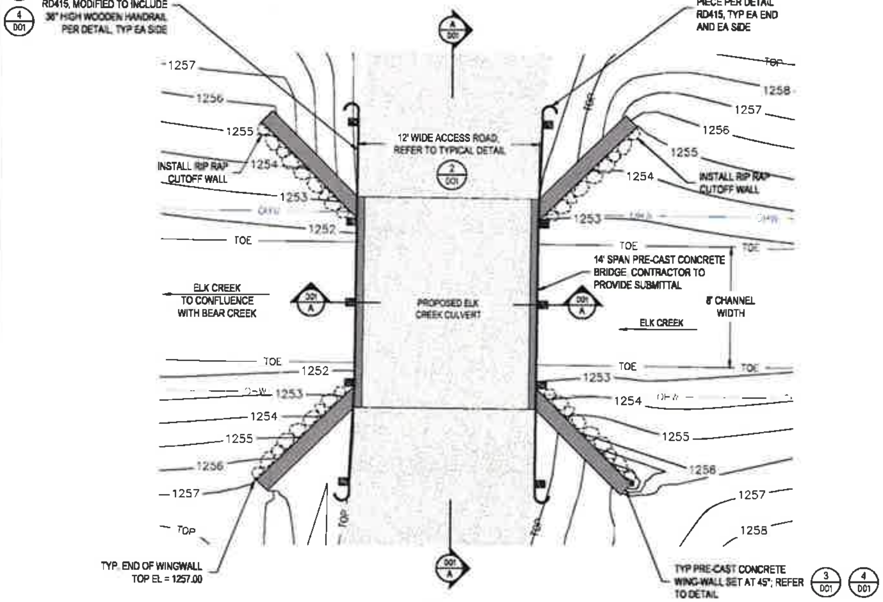
9

Attachment: Attachment 2 - Elk Creek No-Rise Analysis Rev_4-20230109 (1772 : Elk Creek No Rise Certification)

Packet Pg. 32



SECTION A

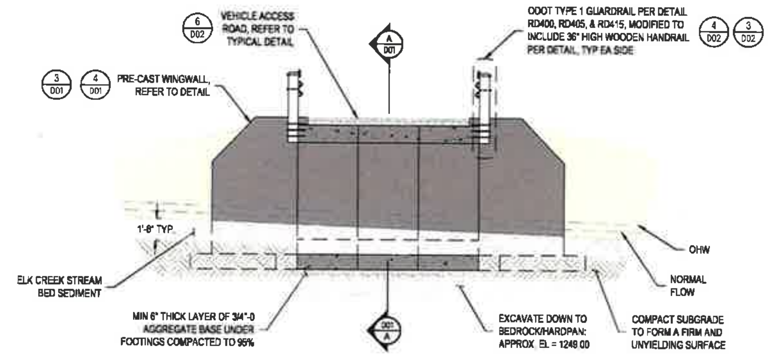


PLAN

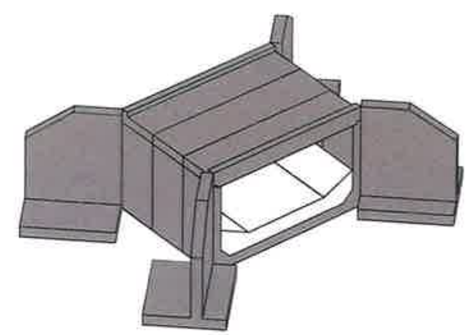
NOTES:

1. CULVERT IS BASED UPON THE PROVISIONS OF THE *ANADROMOUS SALMONID PASSAGE FISH FACILITY DESIGN* PUBLISHED BY THE NATIONAL MARINE FISHERIES SERVICE NORTHWEST REGION, AND THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

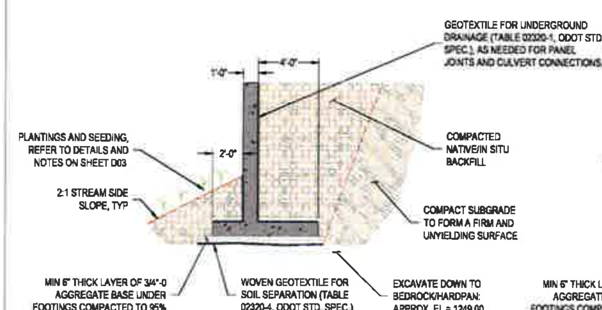
(1 / D01) **PRE-CAST CONCRETE BOX CULVERT INSTALLATION**
NOT TO SCALE



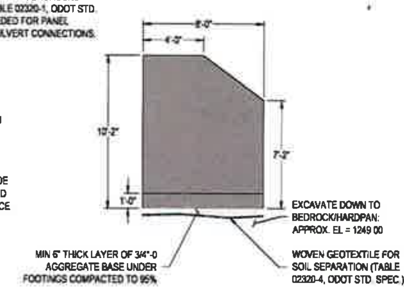
SECTION B



(2 / D01) **PRE-CAST CONCRETE BOX CULVERT**
NOT TO SCALE



(3 / D01) **WINGWALL SECTION**
NOT TO SCALE



(4 / D01) **WINGWALL PANEL DETAIL**
NOT TO SCALE

RH2

PRELIMINARY

CENTRAL POINT

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

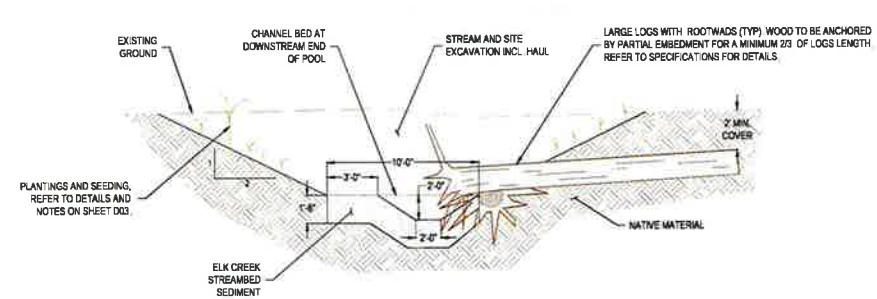
BRIDGE INSTALLATION AT ELK CREEK CONFLUENCE

REVISIONS

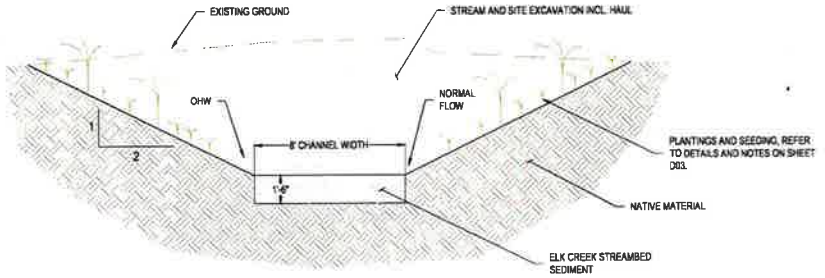
PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

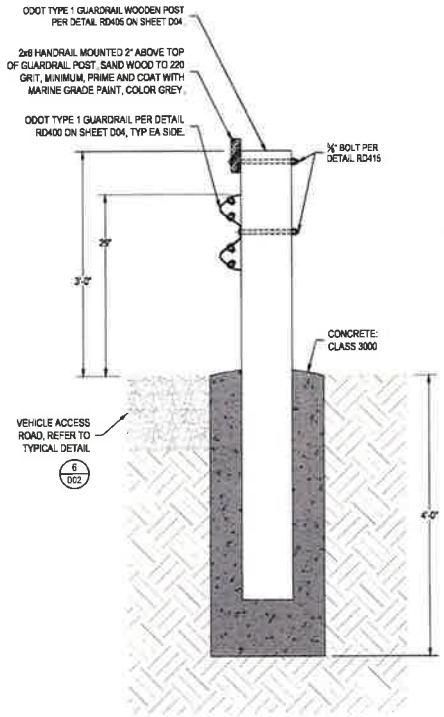
D01 | 6



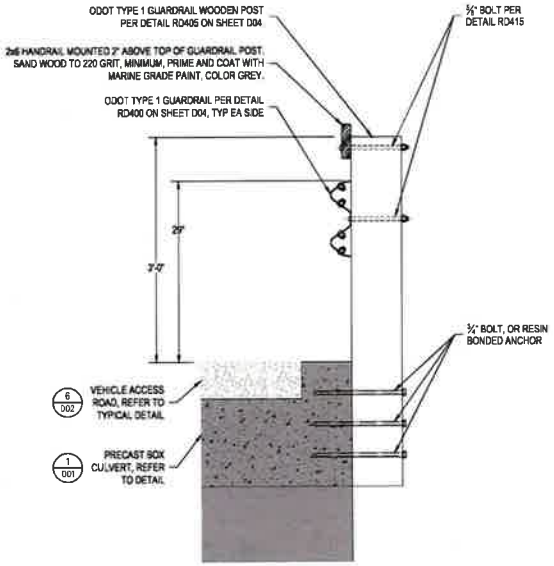
1 D02 **POOL AND ROOT WAD SECTION**
NOT TO SCALE



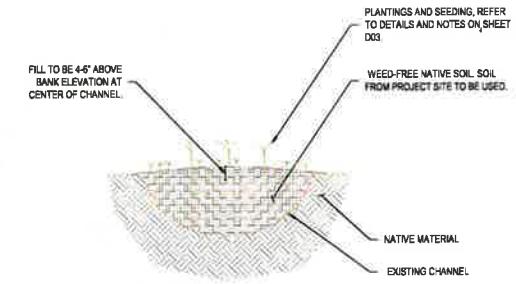
2 D02 **TYP. STREAM SECTION**
NOT TO SCALE



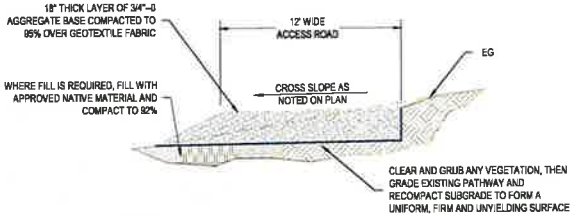
3 D02 **GUARDRAIL POST CULVERT MOUNTING**
NOT TO SCALE



4 D02 **GUARDRAIL POST IN GROUND INSTALLATION**
NOT TO SCALE



5 D02 **EXISTING CHANNEL RESTORATION**
NOT TO SCALE



NOTES:
1. ALL FILL SHALL BE COMPACTED IN 8-INCH THICK MAX LOOSE LIFTS. COMPACTION IS BASED ON MAXIMUM DRY DENSITY PER ASTM D-698 (STANDARD PROCTOR)
2. CUT AND FILL SLOPES SHALL BE 3:1 MAX.
3. GEOTEXTILE FABRIC SHALL BE MIRAFI 1120N, PROPEX GEOTEX 12D1, OR APPROVED EQUAL

6 D02 **TYPICAL VEHICLE ACCESS ROAD**
NOT TO SCALE

RH2

PRELIMINARY

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

PLANTING DETAILS AND NOTES

REVISIONS

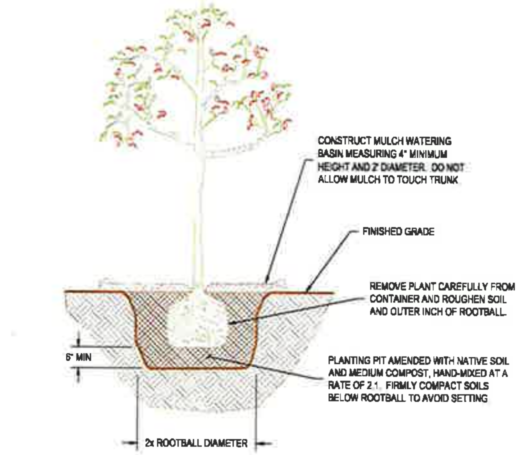
PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

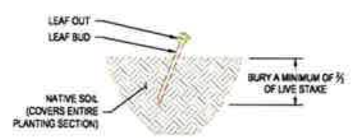
DWG NO: D02 SHEET NO: 7

Attachment: Attachment 2 - Elk Creek No Rise Analysis Rev 4-20210618 (1772 : Elk Creek No Rise Certification)

Packet Pg. 34



1/D03 **DECIDUOUS TREE PLANTING DETAIL**
NOT TO SCALE



2/D03 **LIVE STAKE OR POLE PLANTING DETAIL**
NOT TO SCALE

LIVE STAKE OR POLE PLANTING INSTRUCTIONS

1. LIVE STAKES SHALL BE ¾ TO 1½ INCHES IN DIAMETER OVER THEIR ENTIRE LENGTH AND A MINIMUM OF 3 FEET LONG. LIVE POLES SHALL BE 1-4 INCHES IN DIAMETER OVER THEIR ENTIRE LENGTH AND 3-5 FEET LONG. STAKES SHALL BE PROVIDED WITH THE END TO BE PLANTED ANGLED AS SHOWN IN THE DETAIL.

2. LIVE STAKES AND POLES SHALL BE INSTALLED BY HAND. A PILOT HOLE SHALL BE DUG PRIOR TO INSTALLATION (USE SIMILARLY SIZED REBAR, T-BAR, OR HAND AUGER FOR MAKING PILOT HOLES).

3. LIVE STAKES ARE HIGHLY PERISHABLE AND MUST BE STORED IN SHADED, COOL, MOIST CONDITIONS PRIOR TO INSTALLATION. STAKES STORED SHALL BE COVERED IN BURLAP AND WETTED DAILY. STORE STAKES IN THIS MANNER FOR NO LONGER THAN TWO DAYS.

4. INSTALL STAKES SO THAT A MINIMUM OF ⅔ OF THEIR LENGTH IS BURIED IN SOIL. BACKFILL PIT PER DETAILS THIS PAGE AND PACK SOIL AROUND STAKE FOLLOWING INSTALLATION.

PLANTING AND SEEDING NOTES

GENERAL PLANTING NOTES:

ALL AREAS DISTURBED BY CONSTRUCTION, INCLUDING THOSE SPECIFIC PLANTING AREAS SHOWN, SHALL BE REVEGETATED. PLANTING WILL OCCUR DURING THE IN-WATER WORK WINDOW FROM JUNE 15 TO SEPTEMBER 15 AFTER CONSTRUCTION IS COMPLETE. PLANTING WILL BE DONE BY HAND. SEEDING WILL BE ACCOMPLISHED BY BROADCASTING OR HYDROSEEDING WHEN SOIL MOISTURE IS AVAILABLE (FALL). ANY DEVIATION FROM THE PLANTING PLAN MUST BE APPROVED BY THE CITY AND/OR CITY'S REPRESENTATIVE.

ALL PLANTING SHALL BE COMPLETED BY A LOCAL, LANDSCAPE CONTRACTOR WITH AT LEAST 5 YEARS OF EXPERIENCE IN NATIVE PLANT AND SENSITIVE AREAS RESTORATION. INVASIVE SPECIES REMOVAL AND TREATMENT SHALL ALSO BE COMPLETED BY A LANDSCAPE CONTRACTOR LICENSED AND EXPERIENCED IN THE LATEST TREATMENT METHODOLOGY.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING A PRE-PLANTING MEETING, SUCCESSFUL PLANT INSTALLATION, CITY ACCEPTANCE POST-PLANTING, CREATING AN AS-BUILT DRAWING SHOWING PLANT LOCATIONS FOLLOWING INSTALLATION, AND CARING FOR THE SITE FOR A 3-MONTH PLANT ESTABLISHMENT PERIOD. FOLLOWING THE PLANT ESTABLISHMENT PERIOD, THE CITY WILL ASSUME CARE OF THE SITE.

REVEGETATION SEQUENCING:

REVEGETATION ACTIVITIES SHALL OCCUR PER THE FOLLOWING GENERAL SEQUENCE:

2. PRE-PLANTING MEETING: PRIOR TO PLANT INSTALLATION, THE LANDSCAPE CONTRACTOR, CITY AND/OR CITY'S REPRESENTATIVE SHALL MEET ON-SITE TO ENSURE THE PLANS AND SPECIFICATIONS ARE REVIEWED, AND ALL PARTIES UNDERSTAND THE REQUIREMENTS OF LANDSCAPE ACTIVITIES. PLANT LOCATION PLACEMENT SHALL BE COMPLETED WITH THE ON-SITE DIRECTION OF THE CITY AND/OR CITY'S REPRESENTATIVE.
3. INSTALLATION: COMPLETE PLANT INSTALLATION BY HAND IN ACCORDANCE WITH THE APPROVED PLANTING PLAN AND DETAILS.

   OREGON ASH TREES WILL BE PLANTED ALONG THE BANKS ABOVE THE OHW. ALL TREES INSTALLED SHALL RECEIVE A 4-INCH HIGH BY 2-FOOT DIAMETER, HAND-PACKED MULCH WATERING BASIN.

   WILLOW STAKES WILL BE PLANTED ON STEEP BANKS OF RESTORED CHANNEL IN BETWEEN EXISTING ROCK RIP-RAP.

   THE UNDERSTORY WILL BE BROADCAST SEEDED WITH A NATIVE NORTHWEST GRASS SEED MIX. THE SEED MIX WILL BE APPLIED AT A RATE OF 15 POUNDS PER ACRE (1,406,000 SEEDS PER POUND; SPACING OF 161 SEEDS PER SQUARE FOOT) OR THE RECOMMENDATIONS OF THE SEED DISTRIBUTOR. REMOVE NOXIOUS WEEDS PRIOR TO SEEDING. MAINTENANCE OF NOXIOUS WEEDS FOR FIRST THREE YEARS AFTER RESTORATION WILL BE COMPLETED BY THE CITY.
4. CLEAN-UP: THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF REMOVED PLANTS AND PLANT PARTS, CONTAINERS, BURLAP, ETC. ASSOCIATED WITH PLANTING ACTIVITIES. THESE MATERIALS SHALL BE DISPOSED OF OFF-SITE.
5. CONSTRUCTION INSPECTION: UPON COMPLETION OF INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL REQUEST AN INSPECTION FROM THE CITY. INSPECTIONS WILL BE CONDUCTED TO ENSURE INSTALLATION COMPLIES WITH THE APPROVED PLANTING PLAN AND DETAILS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT ANY DERIVATIONS PRIOR TO CITY ACCEPTANCE.

IRRIGATION:

THE LANDSCAPE CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION FOR THE PROPOSED PLANTING AREA. TEMPORARY IRRIGATION MAY BE SUPPLIED USING A WATER TRUCK, HOSE, OR ABOVEGROUND IRRIGATION SYSTEM. THE CONTRACTOR WILL NEED TO ACCESS WATER VIA THE NEAREST HYDRANT, AND SECURE THE APPROPRIATE HYDRANT PERMIT AND A HYDRANT METER FROM THE CITY FOR THIS PURPOSE. TEMPORARY IRRIGATION SHALL PROVIDE HEAD-TO-HEAD COVERAGE OF THE PROPOSED PLANTING AREA. ALL TREES AND SHRUBS IN THIS ZONE WILL RECEIVE TEMPORARY IRRIGATION FROM JUNE 15 TO SEPTEMBER 15. TREES SHALL RECEIVE A MINIMUM OF 2 INCHES OF WATER PER WEEK. THE LANDSCAPE CONTRACTOR SHALL MODIFY THE DURATION AND FREQUENCY OF SUPPLEMENTAL WATERING, AS NEEDED. THE LANDSCAPE CONTRACTOR SHALL REMOVE TEMPORARY IRRIGATION SYSTEM COMPONENTS AND/OR HOSING FOLLOWING PLANT ESTABLISHMENT PERIOD.

PLANTINGS

TYPE	QUANTITY	SIZE / DENSITY
OREGON ASH	10	5 GALLON/MIN 12 FT SEPARATION
WILLOW STAKES	3417 SQ. FT.	1 PER 8 SQ. FT.
SEED MIX	0.18 ACRES	15 LBS PER ACRE

NORTHWEST GRASS SEED MIX

COMMON NAME	SCIENTIFIC NAME	INDICATOR
TUFTED HAIRGRASS	DESCHAMPSIA CESPITOSA	FACW
SLENDER HAIRGRASS	DESCHAMPSIA ELONGATA	FACW
MEADOW BARLEY	HORDEUM BRACHYANTHERUM	FACW
SPIKE BENTGRASS	AGROSTIS EXERATA	FACW
COMMON RUSH	JUNCUS EFFUSUS	FACW
NEBRASKA SEDGE	CAREX NEBRASCENSIS	OBL

RH2

PRELIMINARY
EXPIRES: 12/31/2023

CENTRAL POINT

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

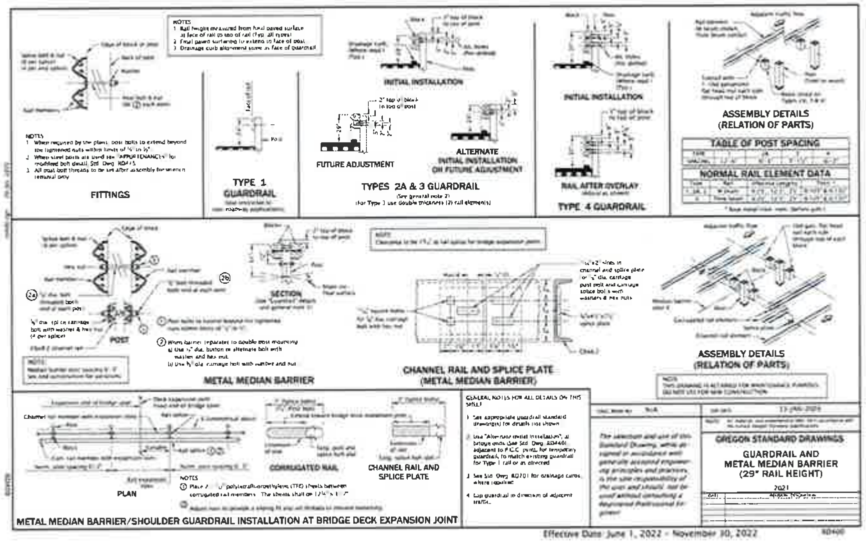
STANDARD DETAILS

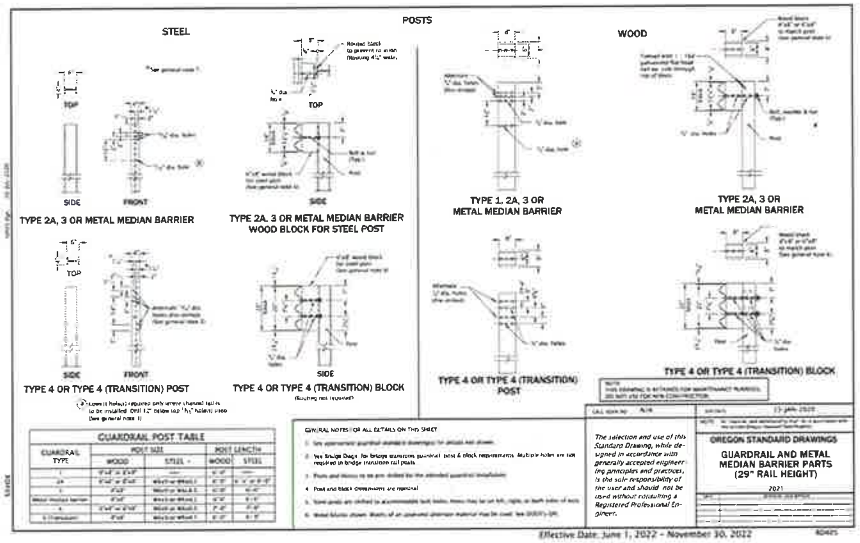
REVISIONS

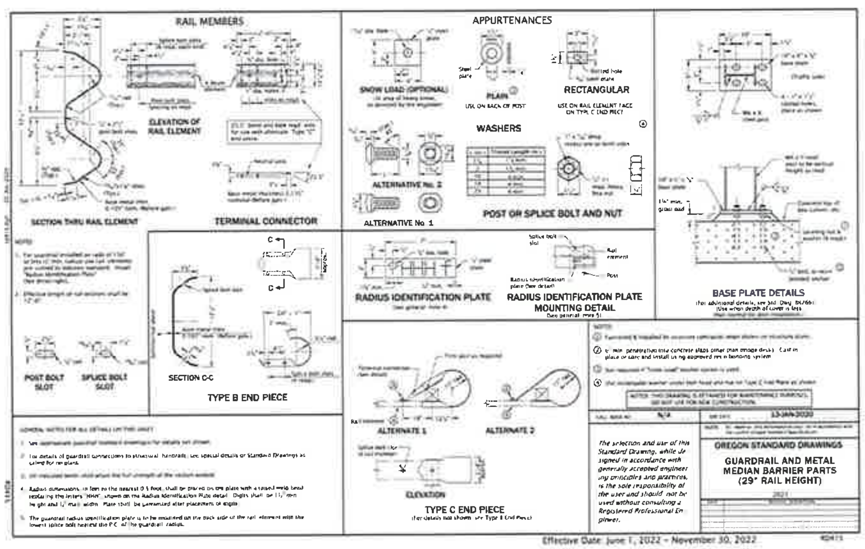
PRELIMINARY REVIEW DRAWINGS

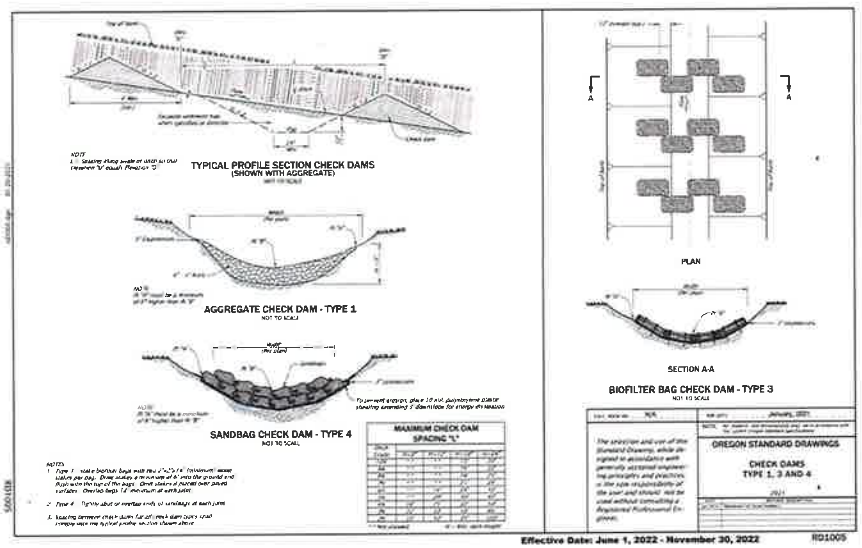
SCALE: SHOWN

D03 8 9









RH2

PRELIMINARY

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

CENTRAL POINT

BRIDGE INSTALLATION AT ELK CREEK CONFLUENCE

REVISIONS

PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

D04

9

Attachment B

Introduction

The City of Central Point reviewed the initial report dated 8 September 2022 and requested Cascade use the effective model to conduct a no-rise analysis to conform with their National Flood Insurance Program flood management obligations. Cascade complied with this request by recreating a portion of the effective model, developing a duplicate effective model, and creating a proposed conditions model to assess project impacts to water surface elevations. This attachment provides a discussion of this effort and provides model results.

Analysis

Cascade obtained a copy of the effective model from the FEMA archives. The model was provided as a pdf scan of the microfiche. RH2 and Cascade transformed the pdf into a digital text document. Cascade was unable to import the model into HEC-RAS and in lieu of recreating the entire model, recreated a portion of the model as described herein. Cross sections R, S, and T shown on the FIRM are labeled in the effective model as cross sections 1450, 1480, and 1500, respectively and shown in Figure 1. Sections 1450 (FIRM section R) and 1500 (FIRM section T) bound the project area. Cascade is unable to identify the significance of the cross section identifiers as the numbering system does not appear to reflect stationing in feet or river miles. Using the landmarks shown on the orthophoto background in the FIRM, Cascade located the sections. Cross section 1450 is located about 1400 feet upstream of the Pine Street Bridge and about 1600 feet downstream of the project. Cross Section 1480 is located about 270 feet upstream of the project, and Cross Section 1500 is located about 2100 feet upstream of the project. Figure 1 shows an excerpt of the FIRM with the cross sections located on the map.

The effective HEC-2 model sections were adjusted from their NAVD 1929 elevations to NGVD 1988 by adding 3.39 feet, as identified in Table 8: Vertical Datum Conversion in the effective FIS. The sections were compared to field surveyed topographic data and LiDAR data. The sections are shown in Figures 2, 3 and 4. The sections appear reasonably close to the present-day topography.

The effective model used Manning's n of 0.07 and 0.065 in sections 1450 and 1480 for the overbanks and channel, respectively. Manning's n of 0.065 and 0.060 were specified for the overbank and channel, respectively, at section 1500. These values are larger than the current vegetation and roughness conditions would warrant and appear higher than would be justified based on the 1976 aerial photograph (see Figure 5). Ineffective areas are not specified in the effective model, which are typically used to limit the cross section area used in the computations to areas that convey water and eliminate areas that may be inundated, but not actively convey water, such as the lower portion of a gravel pit or a backwater area.

Cascade developed reconstructed effective HEC-RAS model with three cross sections using sections 1450, 1480, and 1500 from the effective model. Using the parameters specified in the effective HEC-2 model and a starting water surface elevation of 1262.15, which was the computed water surface elevation at HEC-2 section 1450 (FIRM section R). The flow used to compute these water surface elevations is 21,400 cfs. The effective FIS lists a flow of 20,500 in Table 4. Summary of Discharges as the flow for 'At Medford (USGS Survey Gate (sic) No. 14357500). Cascade believes that it is likely Gage No.

14357500, not Gate No. 14357500 the table is referencing. Cascade used the higher flow of 21,400 cfs provided in the effective model to conduct the analysis.

Cascade's reconstructed model using the HEC-2 effective model cross sections produced results that were less than 0.3 ft different than the effective model adjusted to NAVD88. Results are shown in Table 1. These differences are due to the different computational schemes used in HEC-2 and HEC-RAS.

A corrective effective model, which is different from the recreated effective model, was created by inserting cross sections at Cascade Stations 1933.01, 2694.6, 2905.12, 3121.32, 3242.59, 3369.21, 3494.68, 3760.22. This model is intended to add additional cross sections to better resolve model geometry near the project site. Geometric data for these sections were derived from recent topographic field surveys and LiDAR surveys. Cascade's model station for the corrective effective model begins at the downstream end of the Pine Street Bridge, although the first cross section begins at FIRM cross section R. In other words, the reader can identify the location of the cross section by the distance measured from the downstream side of the bridge. Cross sections 1450 (FIRM R) and 1500 (FIRM T) from the effective HEC-2 model were left unchanged aside from increasing the elevations by 3.39 feet to adjust from NGVD29 to NAVD88. The corrective effective model was run and compared with the reconstructed effective model. Table 2 shows the effective model computed water surface is 2.58 feet lower at FIRM Section S than the corrective effective model. Adding the additional cross sections into the model provided better definition to allow the model to estimate the water surface more accurately between FIRM sections R and T under present-day conditions. Cascade does not have sufficient information to determine the reason for the discrepancies between the effective and corrective effective models. The differences may be due HEC-2 model cross sections not being placed at hydraulic controls or cross section spacing or there may have been earth moving activities that changed channel and floodplain morphology in the intervening years between FIRM sections R and S. The similarities between the HEC-2 and the present day sections and the 1976 aerial photograph (see Figure 5) suggest the HEC-2 model did not adequately locate the sections and had too few sections to accurately model losses between FIRM sections R and S.

The duplicate effective model water surface begins to converge with the effective model water surface elevation at FIRM section F. The duplicate effective computed water surface elevation at Firm section T is 0.66 ft higher than the effective model. The difference in water surface elevation (WSEL) between the reconstructed model and the corrective effective model at FIRM section T is 0.43 ft, which is a better comparison because these computed water surface elevations were both performed using the same hydraulic model, HEC-RAS. A workmap showing the HEC-RAS cross sections is provided in Exhibit B-1

Model results suggest to Cascade that the effective model does not reflect present day flood hazards.

A project conditions model was developed by modifying cross section 3121.32 to reflect the proposed crossing at Elk Creek. Table 3 shows the difference between the project conditions and duplicate effective conditions is less than 0.1 feet, which demonstrates the project has no impact on flood levels.

Discussion

Application of the effective model, corrective effective model, and proposed conditions model to assess potential changes impacts to water levels due to the project, Cascade has determined the project **does not increase water levels**. Furthermore, the effective model does not appear to accurately reflect present day flood conditions with a 1 percent annual probability of occurrence.

However, comparison of the duplicate effective model and the proposed conditions model results which were run using the same parameters allows Cascade to conclude that the proposed project impacts a small section of Bear Creek and **does not impact flood levels nor increase the base flood elevations developed by FEMA.** This finding is in agreement with the original analysis described int Cascade's Technical Memorandum dated September 7th 2022, which presented a more robust and accurate simulation of current conditions within this reach of Bear Creek.

In conclusion, Cascade determines that having used two different modeling methods for this reach of Bear Creek to simulate pre- and post-project conditions, that this project impacts a small portion of Bear Creek and does not impact flood levels, nor does it increase the base flood elevations. **There is no rise due to the project.**

Table 1. Comparison between HEC-2 and Reconstructed Model

FIRM XS LABEL	HEC-2 XS NO.	HEC-2, WSEL (NGVD29)	HEC-2 +3.39 (NAVD88)	FIRM	Reconstructed Model	Difference between HEC-2 +3.39 and Reconstructed Model
T	1500	1271.25	1274.64	1274.7	1274.87	-0.23
S	1480	1267.79	1271.18	1271.2	1271.46	-0.28
R	1450	1260.76	1264.15	1264.2	1264.15	0

Table 2. Comparison Between Effective HEC-2 Model and Duplicate Effective Model

FIRM XS	Cascade HEC-RAS River Sta	Q Total	Duplicate Effective WSEL	Effective Model WSEL	Effective Model WSEL - Duplicate Effective WSEL
		(cfs)	(ft)	(ft)	(ft)
T	10 51+90.26	21400	1275.3	1274.64	-0.66
	9 37+60.22	21400	1273.88		
	8 34+94.68	21400	1273.81		
S	7 33+69.21	21400	1273.76	1271.18	-2.58
	6 32+42.59	21400	1273.72		
	5 31+21.32	21400	1273.52		
	4 29+05.12	21400	1272.63		
	3 26+94.60	21400	1272.11		
	2 19+33.01	21400	1267.36		
R	1 14+96.50	21400	1264.15	1264.15	0

Table 3. Comparision between Duplicate Effective Model and Proposed Model

FIRM XS	Effective HEC-2 XS No.	Cascade Stationing	Corrective Effective Model WSEL, ft	Proposed WSEL, ft
T	1500	10 51+90.26	1275.3	1275.3
		9 37+60.22	1273.9	1273.9
		8 34+94.68	1273.8	1273.8
S	1480	7 33+69.21	1273.8	1273.8

		6	32+42.59	1273.7	1273.7
		5	31+21.32	1273.5	1273.5
		4	29+05.12	1272.6	1272.6
		3	26+94.60	1272.1	1272.1
		2	19+33.01	1267.3	1267.3
R	1450	1	14+96.50	1264.2	1264.2

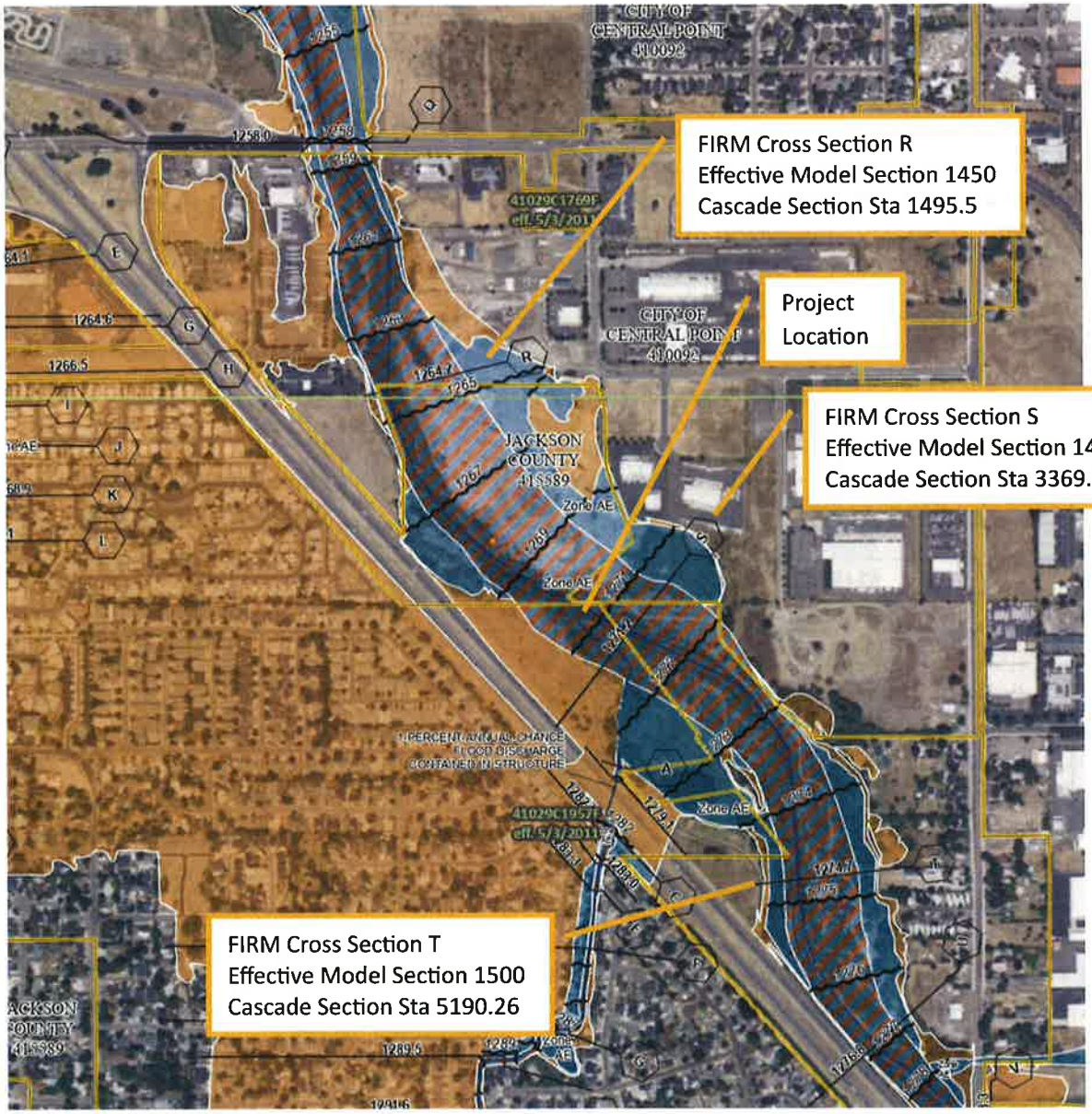


Figure 1. Excerpt of Effective FIRM

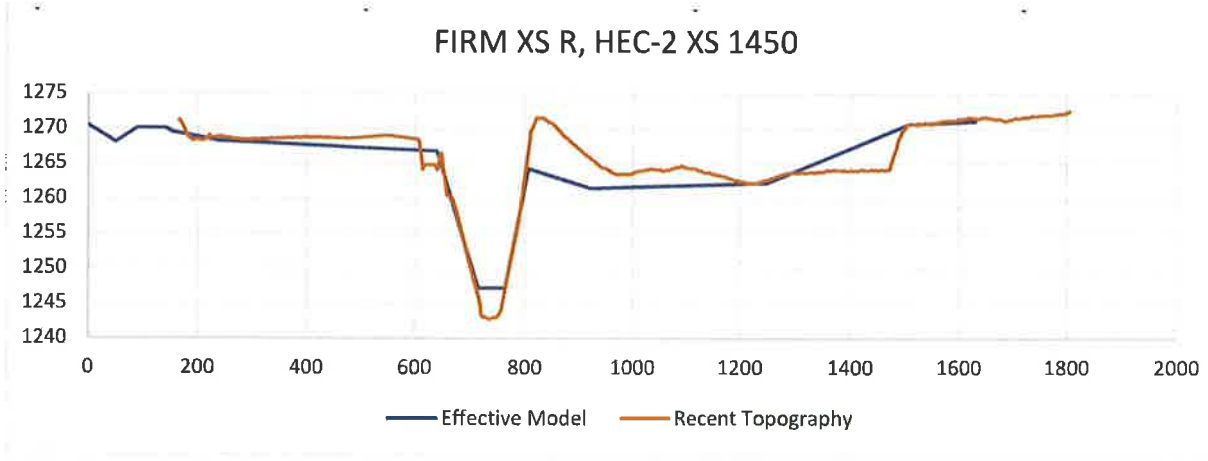


Figure 2. Comparison of Effective FIRM Cross Section R with recent topography

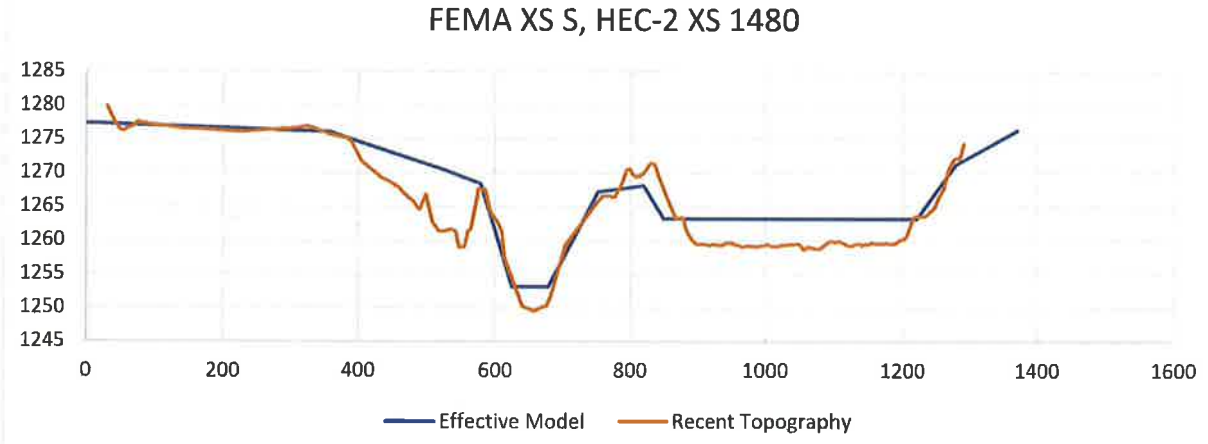


Figure 3. Comparison of Effective FIRM Cross Section S with recent topography

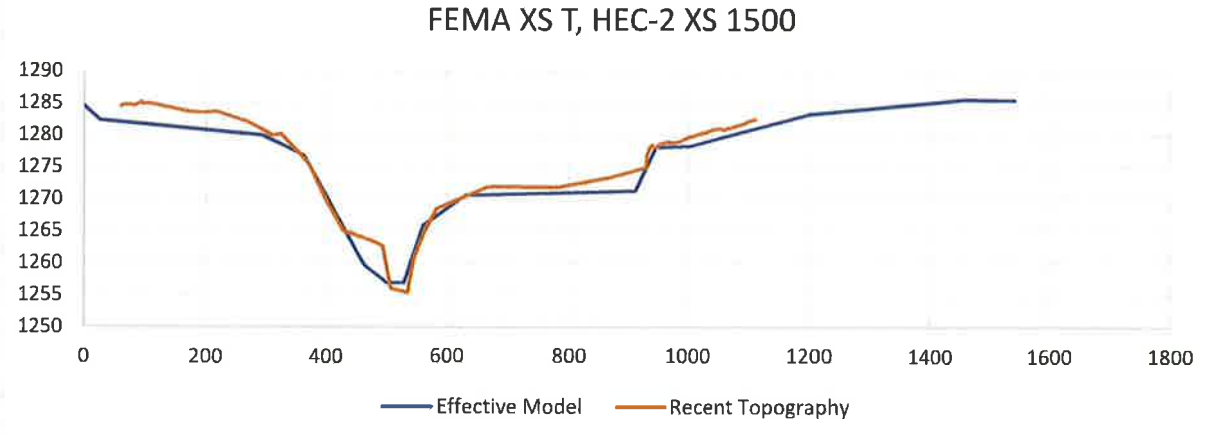


Figure 4. Comparison of Effective FIRM Cross Section T with recent topography

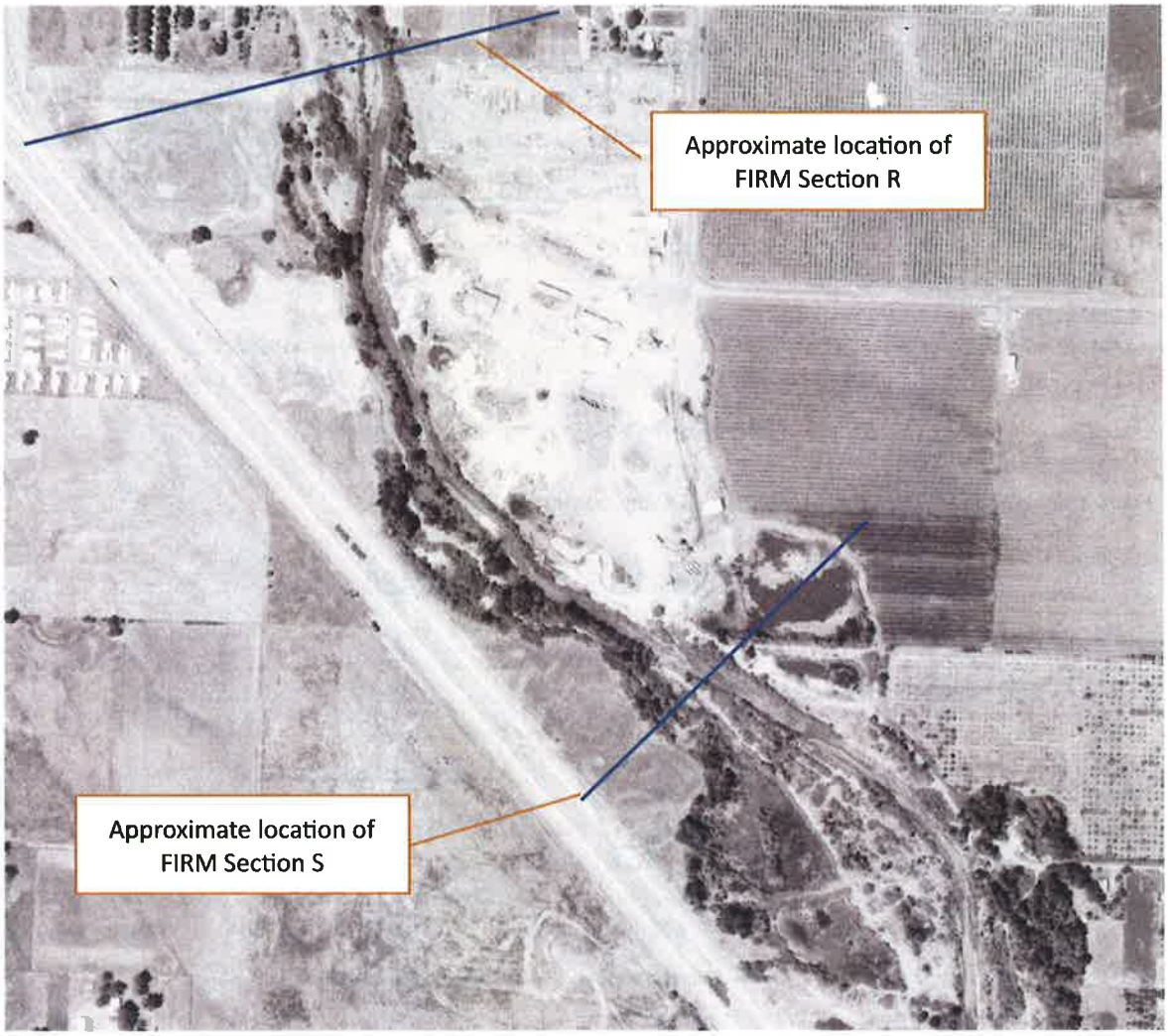


Figure 5. 6 July 1976 Aerial Photograph

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Bear Creek								
A	0	760	6080	4.0	1171.4	1171.4	1172.4	1.0
B	1100	790	3817	6.4	1173.2	1173.2	1174.1	0.9
C	1300	960	6386	3.8	1177.9	1177.9	1177.9	0.0
D	1900	1200	8812	2.8	1178.1	1178.1	1178.4	0.3
E	3600	730	4066	6.0	1178.9	1178.9	1179.9	1.0
F	6800	300	3605	6.3	1188.7	1188.7	1189.5	0.8
G	10400	320	1196	18.9	1198.4	1198.4	1199.0	0.6
H	12500	320	3027	7.5	1204.8	1204.8	1205.7	0.9
I	15400	300	2352	9.6	1213.4	1213.4	1214.2	0.8
J	17300	220	1234	17.3	1218.7	1218.7	1219.3	0.6
K	17800	140	2340	9.2	1222.1	1222.1	1222.2	0.1
L	18000	140	2107	10.2	1223.4	1223.4	1223.4	0.0
M	19900	175	2659	8.0	1232.8	1232.8	1233.2	0.4
N	21800	330	3488	6.1	1238.4	1238.4	1239.2	0.8
O	23300	470	3832	5.6	1242.8	1242.8	1243.7	0.9
P	24500	230	1981	10.8	1247.9	1247.9	1248.7	0.8
Q	26100	200	2591	8.3	1258.0	1258.0	1258.5	0.5
R	27500	480	2804	7.6	1264.2	1264.2	1265.1	0.9
S	29400	550	5095	4.2	1271.2	1271.2	1271.8	0.6
T	31250	422	3622	5.9	1274.7	1274.7	1275.7	1.0
U	32260	236	2569	8.3	1276.8	1276.8	1277.4	0.6
V	33040	155	1688	12.7	1283.3	1283.3	1283.3	0.0
W	35160	322	3407	6.3	1294.0	1294.0	1294.9	0.9
X	36460	144	1493	14.3	1302.2	1302.2	1302.2	0.0

[1]Feet above Kirtland Road

Table 5 — FEDERAL EMERGENCY MANAGEMENT AGENCY — JACKSON COUNTY, OR AND INCORPORATED AREAS — FLOODWAY DATA — BEAR CREEK

Figure 6. Table 4 from Effective FIS

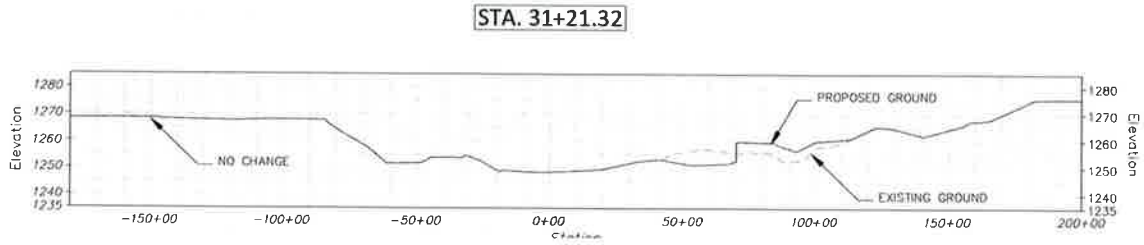


Figure 7. Cross Section Comparison at Project Site

Cascade
STREAM SOLUTIONS
295 East Main Street, Suite 11
Ashland, Oregon 97520
(541) 864-0492
www.cascadestreamsolutions.com

Job:	
Rev:	
Drft:	
Date: 07Sep23	

Work Map

FINDINGS OF FACT
AND CONCLUSIONS OF LAW
File No.: FP-23004

Consideration of a Floodplain Development Permit
to Replace a Culvert and Complete Channel Improvements within the Elk Creek Floodway

Applicant: City of Central Point Parks & Public Works Department 140 S. 3rd Street Central Point, OR 97502	)))))	Findings of Fact and Conclusion of Law

PART 1
INTRODUCTION

The applicant proposes improvements within the Elk Creek floodway including replacing a culvert to improve stream flow and create fish passage in low flow conditions by regrading the channel to eliminate a large drop in the grade.

The floodplain development permit is processed using Type III application procedures. Type III procedures set forth in Section 17.05.400 provides the basis for decisions upon standards and criteria in the development code and the comprehensive plan, when appropriate.

The project site is located in the Special Flood Hazard Area (SFHA) and floodway of Elk Creek. The standards and criteria for the proposal are set forth in CPMC 8.24, Flood Damage Prevention.

The following findings address each of the standards and criteria as applies to the proposed application for improvements within the regulatory floodway of Horn Creek.

PART 2
FINDINGS & CONCLUSIONS

Section 8.24.200 Development in Regulatory Floodways.

Located within areas of special flood hazard established in Section 8.24.070 are areas designated as regulatory floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters, which carry debris, potential projectiles, and erosion potential, development will not normally be allowed within the floodway except when it can be demonstrated the following provisions are satisfied:

A. Except as provided in subsections E and F of this section, encroachments including fill, new construction, substantial improvements, and other development are prohibited unless certification by an Oregon registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge;

Finding 8.24.200(A): *The applicant submitted a No Rise Certification as part of the application, certified by an Oregon registered professional civil engineer. Analysis of the proposed improvements examined the existing condtions in the project area compared to potential changes in flows and flood heights following the completion of the proposed improvements. The analysis is*

consistent with FEMA guidance[1] and demonstrates the project does not result in any increase to flood levels.

Conclusion 8.24.200(A): *Consistent.*

B. Provided that the conditions in subsection A of this section are met, the following additional provisions shall apply:

1. Floodplain development construction standards provided in Sections 8.24.250 and 8.24.260 are met;

2. Any fill allowed to be placed in the floodway shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour;

3. No manufactured dwelling shall be placed in a floodway except in an existing mobile home park or an existing mobile home subdivision, as conditionally approved by the local administrator or designee in consideration of the conditions of Section 8.24.250(H);

Finding 8.24.200(B): *The project proposes to replace an existing culvert and establish a natural gradient within the banks of Elk Creek by sinking the culvert into the channel and grading a natural channel bottom through the length of the culvert, eliminating a barrier to fish passage. Work within the channel includes replacing the existing culvert that is undersized for high flow scenarios with a large drop in gradient that prevents fish migration, along with sizing the channel to provide capacity in high flow scenarios and eliminating a sharp bend that reduces bank erosion.*

The project does not include structures, manufactured dwellings, utilities, tanks, fences or other development as defined in Sections 8.24.250 and 8.24.260.

Conclusion 8.24.200(B): *Not applicable.*

C. The following activities are prohibited in the regulatory floodway:

1. Fences and walls as provided in Sections 8.24.260(A)(1) and 17.57.030; and

2. Accessory structures as provided in Section 8.24.250(J);

Finding 8.24.200(C): *As noted above the project proposes to replace an existing culvert within an existing channel and reestablish the natural channel upstream and downstream of the culvert. The project does not include fences, walls or accessory structures within the floodway.*

Conclustion 8.24.200(C): *Not applicable.*

D. In limited circumstances encroachments associated with functionally dependent uses (i.e., bridges, roads, culverts); historic structure reconstruction, restoration and rehabilitation; and stream restoration projects as provided in subsection F of this section and Section 8.24.270(B)(2)(f), that cause an increase to the BFE are allowed; provided, that the applicant demonstrate that no other alternative is available. In such circumstances, applicants shall obtain a CLOMR from FEMA before an encroachment, including fill, new construction, substantial improvement, and other development in the floodway, is permitted that will cause

[1] FEMA, 2013. Procedures for "No-Rise" Certification for Proposed Developments in the Regulatory Floodway. Letter Report Prepared by FEMA Region X, Bothell, WA. October.

any increase in the BFE, unless the development causes a temporary encroachment and conditions in subsection E of this section and the floodplain development construction standards provided in Sections 8.24.250 and 8.24.260 are satisfied;

Finding 8.24.200(D): *By replacing an under-sized culvert and establishing a natural channel within Elk Creek, the project improves flows within the channel and provides fish passage through the project area, including low flow conditions that were obstructed by the existing culvert. As noted above, the application includes a No Rise Certification comparing existing conditions to potential changes in flows and flood heights following the proposed changes. The analysis demonstrates the proposed project does not aggravate flood conditions, resulting in a measurable decrease to the base flood elevations along Elk Creek.*

Conclusion 8.24.200(D): *Consistent.*

E. Temporary encroachments in the regulatory floodway for the purposes of capital improvement projects, including bridges and culverts, may be permitted if the encroachment results in an increase in flood levels during the occurrence of the base flood discharge; provided, that a conditional letter of map revisions (CLOMR) is applied for and approved by the Federal Insurance Administrator, and the requirements for such revision as established under Title 44 of the Code of Federal Regulations, Section 65.12 are fulfilled. Temporary encroachments shall comply with all other applicable flood hazard reduction provisions of this chapter and may be permitted when:

1. The project is limited as to duration with the days and dates that the structure or other development will be in the regulatory floodway, as specified in the floodplain development permit;

2. Accessory structures (i.e., construction trailers) are restricted from the regulatory floodway;

3. The project limits placement of equipment and material in the regulatory floodway to that which is absolutely necessary for the purposes of the project. Justification that demonstrates compliance with this requirement will be documented by the applicant in the required floodplain development permit application submittal documentation;

4. The applicant identifies any insurable structures affected by temporary changes to the area of special flood hazard or BFE and notifies owners of any increased risk of flooding. Documentation demonstrating compliance with this provision shall be provided to the city as part of the floodplain development application; and

5. The project applicant is provided with written notification that they may be liable for any flood damages resulting from the temporary encroachment;

Finding 8.24.200(E): *The proposed project is not a temporary encroachment into the floodway for a capital improvement project. Furthermore, the No Rise Certification demonstrates the project does not result in an increase to the base flood elevation or aggravate flood conditions.*

Conclusion 8.24.200(E): *Not applicable.*

F. Projects for stream habitat restoration may be permitted in the floodway, provided:

1. The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP-2007-1023);

2. The project does not result in a potential rise in the flood elevation;

3. A conditional letter of map revisions (CLOMR) is applied for and approved by the Federal Insurance Administrator for any rise in the base flood levels, and the requirements for such revision as established under Title 44 of the Code of Federal Regulations, Section 65.12 are fulfilled; and

4. An agreement to monitor the project, correct problems and ensure that flood carrying capacity remains unchanged is included as part of the local floodplain development approval.

Finding 8.24.200(F): *By replacing an undersized culvert, reestablishing a natural channel, and eliminating a small structural barrier, the project will enhance fish passage along this reach of Elk Creek. As part of documentation and permitting, the applicant submitted a General Permit for stream habitat restoration from the Department of the Army. As noted above, the project does not result in an increase to base flood elevations nor aggravate flood conditions. Therefore, a conditional letter of map revision (CLOMR) is not required.*

Through the drainage channel maintenance program, in accordance with CPMC 8.28, the City ensures the maximum conveyance of water and protects and enhances the natural and beneficial uses of waterways within the City. The program includes annual inspections to ensure the channels are free from obstructions, identifies areas with excessive nonnative vegetation, erosion, and bank failures, and maintains records of overall drainage and channel conditions.

Conclusion 8.24.200(F): *Consistent.*

PART 3
SUMMARY CONCLUSION

As evidenced in findings and conclusions, the floodplain development permit for the proposed Elk Creek No Rise Certification is consistent with applicable standards and criteria in the Central Point Municipal Code as conditioned.

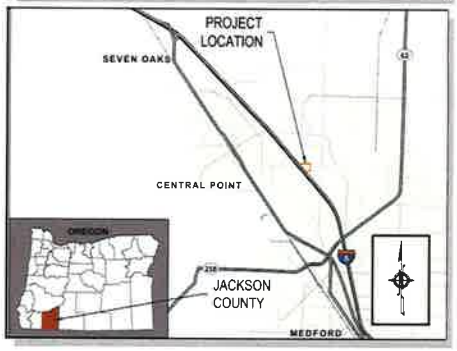
CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

ATTACHMENT 4

SUMMER 2024

SITE ACCESS MAP

PROJECT VICINITY MAP



CALL 48 HOURS BEFORE YOU DIG
ONE CALL 811

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER AT 503-232-1976

LEGEND

EXISTING LEGEND	PROPOSED LEGEND
MAJOR CONTOUR	MAJOR CONTOUR
MINOR CONTOUR	MINOR CONTOUR
TOPO EDGE OF ORDINARY HIGH WATER	OHW
TOPO TOE OF SLOPE	TOE OF SLOPE
TOPO TOP OF SLOPE	TOP OF SLOPE
TREE (DECIDUOUS)	GRAVEL
TREE (TO BE REMOVED)	BARE EARTH AREA
NATURAL GAS VALVE	DISTURBED EARTH AREA
DIRT ROADWAY	WILLOW PLANTINGS
GRAVEL ROADWAY	HERBACEOUS MIX PLANTINGS
VEGETATED AREAS	SCOURING RUSH PLANTINGS
WATER BODY	NATIVE SEED MIX
CLEAR AND GRUB AREA	CONCRETE
OBJECT TO BE REMOVED	STAGING AREA
	BYPASS PIPE
	ACCESS ROUTE
	STREAMBED BOULDER
	TREE (OREGON ASH)

DRAWING INDEX

SHEET NO	SHEET TITLE	DWG NO
1	COVER	COV
2	GENERAL NOTES	G01
3	ALIGNMENT CONTROL	G02
4	EXISTING & DEMOLITION PLAN	C01
5	PROPOSED SITE AND GRADING PLAN	C02
6	PROPOSED STREAMBED SECTIONS	C03
7	FINAL RESTORATION PLAN	C04
8	DETAILS – SHEET 1 OF 5	D01
9	DETAILS – SHEET 2 OF 5	D02
10	DETAILS – SHEET 3 OF 5	D03
11	DETAILS – SHEET 4 OF 5	D04
12	DETAILS – SHEET 5 OF 5	D05

REPORT SPILLS

ATTENTION: OREGON LAW REQUIRES THAT SPILLS BE REPORTED TO THE FOLLOWING ENTITIES:

OREGON EMERGENCY RESPONSE SYSTEM	1-503-378-6377
THE NATIONAL RESPONSE CENTER:	1-800-424-8802

CONTACT PERSONNEL

CONTACT	AGENCY	PHONE
GREG GRAVES	CITY OF CENTRAL POINT	(541) 664-3321 x225
TYLER DUNCAN, P.E	RH2 ENGINEERING	(541) 326-4448
NICK BAKKE	RVSS	(541) 727-6874
ERIC CHASE	SPECTRUM	(541) 210-0827
RYLAN WOOD	PACIFIC POWER	(541) 858-3204
ELI HABERMAN	AVISTA	(541) 690-0901
CAMERON DIBETTA	LUMEN	(541) 324-0549

SECTION AND DETAIL REFERENCES

THE FOLLOWING CONVENTIONS HAVE BEEN USED WITHIN THESE DRAWINGS TO REFER THE READER BETWEEN THE SECTION/DETAIL AND THE PLAN FROM WHICH IT IS REFERENCED.

REFERENCE BUBBLES

ID / ## — PLAN REFERENCE BUBBLE - REFERS READER BACK TO THE PLAN FROM WHICH THE DETAIL OR SECTION ORIGINATED.

ID / ## — DETAIL/SECTION REFERENCE BUBBLE - REFERS READER TO THE DRAWING ON WHICH THE DETAIL OR SECTION IS LOCATED.

WHERE, ID = SECTION/DETAIL REFERENCE NUMBER
= DRAWING NUMBER ON WHICH DETAIL ORIGINATED OR RESIDES.

SECTION/DETAIL REFERENCE NUMBER CONVENTIONS:
SECTIONS OR ELEVATIONS SHOULD HAVE A LETTER REFERENCE NUMBER (A THROUGH ZZ)

REGISTERED PROFESSIONAL ENGINEER — OREGON — EXPIRES: 12/31/2023

RH2

May. 8, 2023
SCG-P-COV.DWG

GENERAL NOTES

PROJECT INFORMATION

PROJECT SITE:
APPROXIMATELY 550 FEET WEST OF NORTHBOUND I-5 MILE MARKER 32 IN CENTRAL POINT, OREGON
LAT: 42°22'18.23"N
LON: 122°53'35.76"W

OWNER:
CITY OF CENTRAL POINT
CITY OF CENTRAL POINT PUBLIC WORKS DEPARTMENT
140 S 3RD STREET, CENTRAL POINT, OR 97502

ENGINEER:
RH2 ENGINEERING, INC.
3553 ARROWHEAD DR. STE. 200, MEDFORD OR 97504

CRITERIA

1. CONSTRUCTION OF ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CITY OF CENTRAL POINT STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS, AND THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION, AS ISSUED BY THE OREGON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION.
2. ALL BUILDING MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION SHALL CONFORM TO THESE DRAWINGS, SPECIFICATIONS, AND OREGON SPECIALTY CODES, LATEST EDITION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL APPLICABLE PERMITS AND APPROVALS ISSUED BY THE CITY OF CENTRAL POINT AND OTHER REGULATORY AUTHORITIES FOR THIS PROJECT.

REFERENCES

1. SURVEY: A TOPOGRAPHICAL SURVEY WAS PREPARED FOR THIS PROJECT BY NEATHAMER SURVEYING, INC. SEE SURVEY INFORMATION ON SHEET G02.
2. GEOTECHNICAL: NO GEOTECHNICAL REPORT OR INVESTIGATIONS WERE MADE IN CONJUNCTION WITH THIS PROJECT. ANY REFERENCES TO GEOLOGIC CONDITIONS ARE BASED ON FIELD OBSERVATIONS BY THE ENGINEER. ONSITE SOILS ARE COBBLY SANDS WITH SOME FINES, TYPICAL OF NATIVE STREAMBED MATERIAL IN THE ROGUE VALLEY, UNDERLAID BY HARDPAN.
3. WETLAND DELINEATION REPORT: A WETLAND DELINEATION REPORT WAS PREPARED FOR THIS PROJECT BY RABE CONSULTING.
4. PERMITS: CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION. PERMITS OBTAINED BY THE CITY INCLUDE:
   - 4.1. CITY OF CENTRAL POINT FLOODPLAIN DEVELOPMENT PERMIT
   - 4.2. UNITED STATES ARMY CORPS OF ENGINEERS AND OREGON DEPARTMENT OF STATE LANDS JOINT FILL-REMOVAL PERMIT
   - 4.3. OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY SECTION 401 WATER QUALITY PERMIT
   - 4.4. OREGON DEPARTMENT OF FISH AND WILDLIFE FISH SALVAGE PERMIT

GENERAL CONSTRUCTION

1. A COPY OF THE APPROVED PLANS AND SPECIFICATIONS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
2. IN THE EVENT THAT STANDARD CONSTRUCTION NOTES ARE FOUND TO BE IN CONFLICT WITH PROJECT SPECIFIC NOTES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. WHERE CONFLICTS ARISE, THE CONTRACTOR SHALL ASSUME THAT THE THE MORE RESTRICTIVE CONDITION SHALL APPLY.
3. THE CITY PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED AT LEAST 2 WORKING DAYS PRIOR TO COMMENCING ANY PROJECT CONSTRUCTION.
4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE PRE-QUALIFIED, SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED.
6. REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY RH2 ENGINEERING, INC. BEFORE CHANGES ARE IMPLEMENTED.
7. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 757.541 TO 757.571, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HAND-EXPOSE (POTHOLE) UNDERGROUND FACILITIES AND USE REASONABLE CARE TO AVOID DAMAGING THEM.
8. GRANULAR MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY THE CITY OF CENTRAL POINT. THE CONTRACTOR SHALL NOTIFY THE CITY OF THE MATERIAL SOURCE PRIOR TO ANY GRANULAR MATERIAL PLACEMENT AND SHALL NOT CHANGE MATERIAL SOURCE WITHOUT APPROVAL.
9. ALL CONCRETE SHALL BE 3300 PSI AT 28 DAYS UNLESS OTHERWISE SPECIFIED.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
2. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM ADVANCE NOTIFICATION TO THE OWNER, ENGINEER, AND ALL AFFECTED UTILITY COMPANIES PRIOR TO ACTUAL START OF WORK.
3. CONSTRUCTION STAKING SHALL BE PERFORMED A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION BY A SURVEYOR HOLDING A VALID PROFESSIONAL LAND SURVEYING LICENSE ISSUED BY THE STATE OF OREGON.
4. PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED LOCAL, STATE, OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL.
5. UNLESS OTHERWISE NOTED, ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED.
6. AN AS-BUILT SURVEY OF THE PROJECT SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION.

SITE

1. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE OWNER AND ADJACENT PROPERTY OWNERS FOR ACCESS THROUGH AND STORAGE OF MATERIALS AND EQUIPMENT.
2. DO NOT DISTURB ANY AREAS OUTSIDE OF CONSTRUCTION LIMITS.
3. PRIOR TO ANY SIGNIFICANT GROUND DISTURBANCE OR ENTRY OF MECHANIZED EQUIPMENT OR VEHICLES INTO THE CONSTRUCTION AREA, CLEARLY MARK WITH FLAGGING OR SURVEY MARKING PAINT THE FOLLOWING AREAS:
   - 3.1. SENSITIVE AREAS, E.G. WETLANDS, WATER BODIES, SPAWNING AREAS WILL BE FLAGGED AND IDENTIFIED BY A QUALIFIED BIOLOGIST.
   - 3.2. EQUIPMENT ENTRY AND EXIT POINTS.
   - 3.3. ROAD AND STREAM CROSSING ALIGNMENTS.
   - 3.4. STAGING, STORAGE, AND STOCKPILE AREAS.
4. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING INTEGRITY AND SECURITY OF SITE TO DISCOURAGE ACCESS BY UNAUTHORIZED PERSONNEL.
5. REFER TO STAGING AREA LOCATIONS AND TYPES SHOWN ON THE COVER SHEET, WHICH SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
   - 5.1. TYPE 1 STAGING AREA: NO FUELING OR SERVICING OF VEHICLES OR EQUIPMENT NOR STORAGE OF HAZARDOUS MATERIALS, FUELS, OR EQUIPMENT WITH FUEL TANKS LARGER THAN 5 GALLONS IS ALLOWED WITHIN TYPE 1 STAGING AREAS. NATURAL MATERIALS MAY BE STORED WITHIN TYPE 1 STAGING AREAS PROVIDED ADEQUATE EROSION CONTROL MEASURES ARE PROVIDED TO AVOID RUNOFF OF SEDIMENT AND NATURAL MATERIALS.
   - 5.2. TYPE 2 STAGING AREA: EQUIPMENT, FUEL, HAZARDOUS MATERIALS, FUELING AND SERVICING OPERATIONS MAY OCCUR WITHIN TYPE 2 STAGING AREAS, WHICH ARE DEFINED AS BEING A MINIMUM OF 150 FEET FROM ANY NATURAL WATER BODY OR WETLAND. ALL VEHICLES ARE TO BE CLEANED OF ALL EXCESS CONCRETE AND DIRT PRIOR TO LEAVING THE SITE.
6. THE CONTRACTOR SHALL CLEANUP ALL AREAS AFFECTED BY HIS ACTIVITIES TO THE SATISFACTION OF THE OWNER BY THE END OF EACH WORKING DAY OR MORE FREQUENTLY IF REQUIRED BY THE OWNER. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, TRASH, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY CONSTRUCTION ACTIVITIES. FAILURE TO CLEANUP TO THE SATISFACTION OF THE OWNER WILL NECESSITATE A SHUTDOWN OF THE PROJECT UNTIL CLEANUP IS PROPERLY PERFORMED. DAILY CLEANUP IS AN INTEGRAL PART OF EROSION AND POLLUTION CONTROL. IN ADDITION, THE CONTRACTOR SHALL PROTECT ALL ROADS FROM DAMAGE AND SEDIMENT TRANSPORT DURING CONSTRUCTION. ANY DAMAGE OR CLEANUP SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE AND BE COMPLETED TO THE SATISFACTION OF THE OWNER.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEETING ALL DISPOSAL REQUIREMENTS INCLUDING OFF SITE DISPOSAL OF WASTE MATERIAL AT APPROVED SITES.
8. PLACEMENT OR STORAGE OF SPOILS IS NOT PERMITTED ON HARD SURFACE STREETS OR BIKE PATHS WITHIN PUBLIC RIGHT-OF-WAY. SPOILS STORED IN OTHER AREAS SHALL BE COVERED TO PREVENT EROSION AND/OR SEDIMENT TRANSPORT.
9. AFTER CONSTRUCTION IS COMPLETE, OBLITERATE ALL TEMPORARY ACCESS ROADS, CROSSINGS, STAGING, STORAGE, AND STOCKPILE AREAS, STABILIZE THE SOIL, AND REVEGETATE. ALL BARE EARTH AREAS SHALL BE SEEDED WITH AN APPROVED NATIVE SEED MIX UNLESS NOTED OTHERWISE, REFER TO PLANTING PLAN AND THE SPECIFICATIONS.
6. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EXISTING OR BETTER CONDITION UNLESS OTHERWISE STATED ON THE PLANS.
7. NO HERBICIDES OR PESTICIDES SHALL BE USED IN CONJUNCTION WITH THIS PROJECT.
8. TEMPORARY ACCESS ROADS AND PATHS:
   - 8.1. EXISTING ACCESS ROADS ONLY SHALL BE USED.
   - 8.2. RESTORE ACCESS ROADS TO EXISTING OR BETTER CONDITIONS, OR AS INDICATED ELSEWHERE IN THESE PLANS.
9. RESTORE ANY SIGNIFICANT DISTURBANCE OF RIPARIAN VEGETATION, SOILS, STREAM BANKS OR STREAM CHANNEL.
10. LOOSEN SOILS TO PROMOTE REVEGETATION AND INFILTRATION IN ALL AREAS USED AS TEMPORARY ACCESS ROADS, STAGING, AND OTHER AREAS WHERE SOILS HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITY. IN GRASSY AREAS, SOILS SHALL BE LOOSENED TO A DEPTH OF 3-INCHES, AND IN RIPARIAN AREAS, SOILS SHALL BE LOOSENED TO A DEPTH OF 8-INCHES. A VARIETY OF IMPLEMENTS/METHODS ARE AVAILABLE TO DE-COMPACT SOILS, INCLUDING: WINGED SUBSOILERS, ROCK RIPPER, EXCAVATORS WITH BRUSH RAKES, MULCHING HEADS, OR CUSTOM ATTACHMENTS SUCH AS THE SUBSOILING GRAPPLE RAKE AND SUBSOILING EXCAVATING BUCKET (EGG. RIPPING SOILS WITH AN EXCAVATOR BUCKET MOUNTED WITH TEETH). IN AREAS OF DISPERSED SOIL DISTURBANCE SPOT TILLAGE MAY BE IMPLEMENTED.

WORK AREA ISOLATION AND IN-WATER WORK

1. ALL IN-WATER WORK SHALL BE CONDUCTED WITHIN THE IN-WATER WORK PERIOD, WHICH IS JUNE 15TH THROUGH AUGUST 30TH.
2. PRIOR TO ANY WORK WITHIN ELK CREEK AND PRIOR TO DEWATERING THE WORK AREA, FISH WITHIN THE WORK AREA WILL BE SALVAGED AND RELOCATED BY A QUALIFIED FISH BIOLOGIST WITH A VALID ODFW SALVAGE PERMIT. SALVAGED FISH WILL BE PLACED INTO ELK CREEK UPSTREAM OF THE ISOLATED WORK AREA. BEAR CREEK IS GENERALLY TOO HOT TO SUPPORT NATIVE MIGRATORY FISH SPECIES DURING THE SPECIFIED CONSTRUCTION PERIOD. SALVAGE SERVICES WILL BE PROVIDED BY THE CITY, AND CONTRACTOR SHALL SUBMIT THEIR DEWATERING PLAN AND COORDINATE FISH SALVAGE A MINIMUM OF SEVEN CALENDAR DAYS PRIOR TO THE REQUESTED DATE OF FISH SALVAGE.
3. DOWNSTREAM FISH PASSAGE WILL BE ACCOMPLISHED WITH A BYPASS PIPE. REFER TO THE PLAN AND DETAIL SHEETS WITHIN THIS PLAN SET FOR ADDITIONAL INFORMATION.
4. WHENEVER A PUMP IS USED TO DEWATER THE ISOLATED WORK AREA, A FISH SCREEN MEETING THE MOST CURRENT VERSION OF NMFS'S FISH SCREEN CRITERIA SHALL BE USED, AND NMFS VERIFICATION IS REQUIRED FOR PUMPING AT A RATE THAT EXCEEDS 3 FPS.
5. SEEPAGE WITHIN THE WORK AREA SHALL BE PUMPED INTO A TEMPORARY STORAGE AND TREATMENT SITE, OR TO UPLAND AREAS AND BE ALLOWED TO PERCOLATE INTO THE SOIL, OR ALTERNATIVELY A VEGETATED AREA AND TREATMENT SYSTEM TO REMOVE TURBIDITY SHALL BE IMPLEMENTED SUCH THAT SEDIMENT LADEN WATER DOES NOT COME INTO CONTACT WITH ELK CREEK OR BEAR CREEK.
6. MONITOR THE CONSTRUCTION SITE TWICE PER DAY TO ENSURE THAT NO STRANDING OF AQUATIC ORGANISMS OCCURS, AND REMOVE ANY SUCH ORGANISMS FROM THE SITE UPSTREAM INTO ELK CREEK AS NECESSARY.
7. WHEN CONSTRUCTION IS COMPLETE AND HAS BEEN APPROVED BY THE ENGINEER, RE-WATER THE CONSTRUCTION SITE SLOWLY TO PREVENT A SUDDEN INCREASE IN TURBIDITY.

UTILITIES

1. UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON AS-BUILT FIELD LOCATION OF EXISTING STRUCTURES. OTHER UTILITIES OR DEVIATIONS FROM THESE PLANS MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO CONSTRUCTION FOR VERIFICATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION OF ANY EARTHWORK OR OTHER ACTIVITIES WHICH COULD POTENTIALLY DAMAGE EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY OREGON UTILITY NOTIFICATION CENTER AND THE CITY OF CENTRAL POINT PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY AND THE UTILITY COMPANY WHEN A CONFLICT OCCURS OR WHEN A CONFLICT IS ANTICIPATED.
2. OVERHEAD UTILITIES: NOT ALL OVERHEAD UTILITIES MAY BE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO INDEPENDENTLY VERIFY ALL OVERHEAD UTILITIES. THE CONTRACTOR SHALL ACCOUNT FOR ACCOMMODATING ALL OVERHEAD UTILITIES IN THEIR BID AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR FACILITATING OVERHEAD UTILITIES.
3. EXISTING WATER AND POWER FACILITIES MAY NOT BE SHUT DOWN FOR ANY PERIOD WITHOUT PRIOR APPROVAL FROM OWNER. A MINIMUM OF ONE WEEK NOTICE TO THE OWNER IS REQUIRED FOR ANY SHUT DOWN. THE CONTRACTOR SHALL NOT OPERATE EXISTING WATER, SEWER, OR POWER SYSTEM EQUIPMENT (VALVES, SWITCHES, ETC.).
4. THE CONTRACTOR SHALL NOTIFY FRANCHISE OFFICIAL A MINIMUM OF 48 HOURS IN ADVANCE OF ANY PLANNED DISRUPTION TO UTILITIES INCLUDING, BUT NOT LIMITED TO WATER, SEWER, NATURAL GAS, IRRIGATION, TELEPHONE, POWER, CABLE AND FIBER OPTICS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND STRUCTURES.

DEMOLITION NOTES

1. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL REMOVE ALL COMPONENTS SHOWN TO BE DEMOLISHED IN THEIR ENTIRETY, AND SHALL PROPERLY DISPOSE OF ALL REMOVED ITEMS.
3. CONTRACTOR SHALL INSTALL STREAM DIVERSION SYSTEM AND ALL NECESSARY TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO COMMENCING ANY GRUBBING, EARTHWORK, OR OTHER WORK THAT COULD RELEASE SEDIMENT INTO WATERWAYS.

TRAFFIC CONTROL

1. THE CONTRACTOR SHALL PREPARE A WRITTEN AND DRAWN TCP WHICH SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE PRE-CONSTRUCTION CONFERENCE IN ACCORDANCE WITH SECTION 00225 OF THE STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL SAFEGUARD THE PERSONS AND PROPERTY OF THE TRAVELING PUBLIC. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ERECTING AND MAINTAINING TRAFFIC CONTROL THROUGHOUT THE PROJECT DURATION IN ACCORDANCE WITH THE APPROVED TCP. ALL TRAFFIC CONTROL DEVICES SHALL MEET MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS.
3. CONTRACTOR SHALL PROVIDE FOR EMERGENCY VEHICLE ACCESS TO ALL PROPERTIES ADJACENT TO THE PROJECT SITE AT ALL TIMES.
4. WHEN CONSTRUCTION ACTIVITIES BLOCK OR INTERFERE WITH NORMAL PEDESTRIAN AND BICYCLIST ROUTING, PROVIDE SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS EITHER THROUGH THE CONSTRUCTION, OR REROUTED AROUND THE CONSTRUCTION, UTILIZING ODOT STANDARD DRAWING TM844 AND THE REQUIREMENTS OF SUBSECTION 00220.02(B) OF THE STANDARD SPECIFICATIONS.

GENERAL TESC

1. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE EROSION CONTROL STANDARDS AND IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF TESC FACILITIES AS REQUIRED TO PREVENT EROSION UNTIL ALL CONSTRUCTION IS APPROVED. REFER TO THE OREGON CONSTRUCTION STORMWATER EROSION AND SEDIMENT CONTROL MANUAL, LATEST EDITION.
2. PRIOR TO COMMENCEMENT OF ANY SIGNIFICANT EARTHWORK, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING WETLANDS OR NATURAL WATER BODIES.
3. IN THE EVENT OF ANY EROSION CONTROL MEASURE FAILURE, IMMEDIATE ACTION SHALL BE TAKEN TO REPAIR, REPLACE, OR IMPLEMENT ADDITIONAL MEASURES AS REQUIRED TO ENSURE ADEQUATE EROSION CONTROL PROTECTION.
4. ANY DISCHARGE OF SEDIMENT-LADEN RUN-OFF OR OTHER POLLUTANTS TO WATERS OF THE STATE IS SUBJECT TO ENFORCEMENT ACTION, THE COST FOR WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. DURING CONSTRUCTION, ALL RELEASES OF OILS, HYDRAULIC FLUIDS, FUELS, OTHER PETROLEUM PRODUCTS, PAINTS, SOLVENTS, AND OTHER DELETERIOUS MATERIALS MUST BE CONTAINED AND REMOVED IN A MANNER THAT WILL PREVENT THEIR DISCHARGE TO WATERS AND SOILS. THE CLEANUP OF SPILLS SHALL TAKE PRECEDENCE OVER OTHER WORK ON THE PROJECT. BARRELS, PETROPHILIC PADS, TARPS, AND OTHER EQUIPMENT NECESSARY FOR CAPTURING, CONTROLLING, AND DISPOSING OF HAZARDOUS FLUIDS SHALL BE AVAILABLE ON-SITE AT ALL TIMES.
6. PROPER EROSION AND SEDIMENT CONTROL PRACTICES MUST BE USED ON THE CONSTRUCTION SITE AND ADJACENT AREAS TO PREVENT SEDIMENTS FROM ENTERING THE NATURAL DRAINAGE SYSTEM. ALL SURFACE AREAS DISTURBED AND ANY EMBANKMENTS OR EXCAVATIONS CREATED BY CONSTRUCTION ACTIVITIES MUST BE REVEGETATED OR PROVIDED AN EQUIVALENT TYPE OF PROTECTION AGAINST EROSION.
7. OWNER REPRESENTATIVES MAY DIRECT MAINTENANCE AND REPAIR OF TESC MEASURES AND/OR FACILITIES AS THE HIGHEST PRIORITY WORK AT ANY TIME THE TESC MEASURES AND/OR FACILITIES DO NOT MEET THE PERMIT, CITY, OR PLAN REQUIREMENTS.
8. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SWEEP TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE OWNER'S REPRESENTATIVE. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL.
9. DURING THE CONSTRUCTION PERIOD, THE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY THE ENGINEER, OWNER, OR REGULATORY AGENCY. THE CONTRACTOR SHALL BE COGNIZANT OF FUTURE WEATHER PATTERNS AND PLAN ACCORDINGLY.
10. CLEARING AND GRUBBING WHERE REQUIRED SHALL BE PERFORMED WITHIN THE CONSTRUCTION AREAS SHOWN ON THE PLANS. DEBRIS RESULTING FROM THE CLEARING AND GRUBBING SHALL BE DISPOSED OF BY THE CONTRACTOR AND IN ACCORDANCE WITH THE TERMS OF ALL APPLICABLE PERMITS.
11. THE CONTRACTOR SHALL FENCE ALL VEGETATION TO BE RETAINED ON SITE TO THE DRIPLINE FOR TREES OR OUTER VEGETATION EDGE FOR SHRUBS. FENCING SHALL BE HIGH-VISIBILITY CONSTRUCTION FENCE TO BE RETAINED FOR THE DURATION OF THE CONSTRUCTION.
12. TESC MATERIALS ON HAND – THE CONTRACTOR SHALL KEEP A SUFFICIENT SUPPLY OF TESC MATERIALS ON HAND TO REMEDY ANY FAILURE OF TESC BMPS THAT IS DETRIMENTAL TO DOWNSTREAM OR ADJACENT DRAINAGE DITCHES, CONVEYANCE SYSTEMS, OR OTHER PROPERTIES. THESE MATERIALS INCLUDE, BUT ARE NOT LIMITED TO: SANDBAGS, SILT FENCE, EROSION CONTROL BLANKET, ROCK, STRAW OR MULCH.
13. THE TESC FACILITIES SHALL BE INSPECTED AT LEAST WEEKLY BY THE CONTRACTOR'S TESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
14. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR FOURTEEN CONSECUTIVE DAYS DURING THE WET SEASON OR THIRTY DAYS DURING THE DRY SEASON SHALL BE STABILIZED WITH THE APPROVED TESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.)
15. OREGON LAW REQUIRES THAT SPILLS BE REPORTED TO THE FOLLOWING ENTITIES:

    OREGON EMERGENCY RESPONSE SYSTEM: 1-503-378-6377
    THE NATIONAL RESPONSE CENTER: 1-800-424-8802

16. DURING CONSTRUCTION:
    - 16.1. COMPLETE EARTHWORK IN WETLANDS, RIPARIAN AREAS, AND STREAM CHANNELS AS QUICKLY AS POSSIBLE.
    - 16.2. CEASE PROJECT OPERATIONS WHEN HIGH FLOWS MAY INUNDATE THE PROJECT AREA, EXCEPT FOR EFFORTS TO AVOID OR MINIMIZE RESOURCE DAMAGE.
    - 16.3. IF ERODED SEDIMENT APPEARS LIKELY TO BE DEPOSITED IN THE STREAM DURING CONSTRUCTION, INSTALL ADDITIONAL SEDIMENT BARRIERS AS NECESSARY.
    - 16.4. TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE FIBER WATTLES, SILT FENCES, JUTE MATTING, WOOD FIBER MULCH AND SOIL BINDER, OR GEOTEXTILES AND GEOSYNTHETIC FABRIC.
    - 16.5. SOIL STABILIZATION USING WOOD FIBER MULCH AND TACKIFIER (HYDRO-APPLIED) MAY BE USED TO REDUCE EROSION OF BARE SOIL IF THE MATERIALS ARE FREE OF NOXIOUS WEEDS AND NONTOXIC TO AQUATIC AND TERRESTRIAL ANIMALS, SOIL MICROORGANISMS, AND VEGETATION.
    - 16.6. INSPECT AND MONITOR POLLUTION AND EROSION CONTROL MEASURES THROUGH THE LENGTH OF THE PROJECT.
    - 16.7. REMOVE SEDIMENT FROM EROSION CONTROLS IF IT REACHES ONE-THIRD OF THE EXPOSED HEIGHT OF THE CONTROL.
    - 16.8. WHENEVER SURFACE WATER IS PRESENT, MAINTAIN A SUPPLY OF SEDIMENT CONTROL MATERIALS AND AN OIL ABSORBING FLOATING BOOM AT THE PROJECT SITE.
    - 16.9. STABILIZE ALL DISTURBED SOILS FOLLOWING ANY BREAK IN WORK UNLESS CONSTRUCTION WILL RESUME WITH IN FOUR DAYS.
17. REMOVE TEMPORARY EROSION CONTROLS AFTER CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN FULLY STABILIZED.

HAZARDOUS MATERIAL SAFETY

1. AT THE PROJECT SITE:
   - 1.1. POST WRITTEN PROCEDURES BY THE GRANTEE FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES, INCLUDING AN INVENTORY AND DESCRIPTION OF ALL HAZARDOUS MATERIALS PRESENT, AND THE STORAGE AND HANDLING PROCEDURES FOR THEIR USE.
   - 1.2. MAINTAIN A SPILL CONTAINMENT KIT, WITH SUPPLIES AND INSTRUCTIONS FOR CLEANUP AND DISPOSAL, ADEQUATE FOR THE TYPES AND QUANTITIES OF HAZARDOUS MATERIALS PRESENT.
   - 1.3. WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES, INCLUDING THE LOCATION AND USE OF SPILL CONTAINMENT KITS.
   - 1.4. TEMPORARILY CONTAIN ANY WASTE LIQUIDS GENERATED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPAULIN, IN THE TYPE 2 STAGING AREA UNTIL THE WASTES CAN BE PROPERLY TRANSPORTED TO, AND DISPOSED OF, AT AN APPROPRIATE RECEIVING FACILITY.

EQUIPMENT, VEHICLES, AND POWER TOOLS

1. SELECT, OPERATE AND MAINTAIN ALL HEAVY EQUIPMENT, VEHICLES, AND POWER TOOLS TO MINIMIZE DAMAGE TO NATURAL VEGETATION AND PERMEABLE SOILS, E.G., LOW PRESSURE TIRES, MINIMAL HARD-TURN PATHS FOR TRACK VEHICLES, USE OF TEMPORARY MATS OR PLATES TO PROTECT WET SOILS.
2. BEFORE ENTERING WETLANDS OR WORKING WITHIN 150 FEET OF A WATER BODY:
   - 2.1. POWER WASH ALL HEAVY EQUIPMENT, VEHICLES AND POWER TOOLS, ALLOW THEM TO FULLY DRY, AND INSPECT THEM FOR FLUID LEAKS, AND TO MAKE CERTAIN NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ARE ADHERING TO THE SURFACE.
   - 2.2. ENSURE ALL EQUIPMENT TO BE OPERATED BELOW ORDINARY HIGH WATER IS LEAK FREE OR OPERATING WITH BIODEGRADABLE PRODUCTS. THIS DOES NOT APPLY TO VEHICLES AND EQUIPMENT THAT ARE DOING ROAD WORK AND/OR PASSING THROUGH A PROJECT AREA (E.G., DOZERS, GRADERS, ETC.).
3. INSPECT AND REPEAT CLEANING AS OFTEN AS NECESSARY DURING OPERATION TO KEEP ALL EQUIPMENT, VEHICLES, AND POWER TOOLS FREE OF EXTERNAL FLUIDS AND GREASE, AND TO PREVENT A LEAK OR SPILL FROM ENTERING THE WATER.
4. AVOID USE OF HEAVY EQUIPMENT, VEHICLES OR POWER TOOLS BELOW OHW UNLESS PROJECT SPECIALISTS DETERMINE SUCH WORK IS NECESSARY, OR IF IT IS A TEMPORARY STREAM CROSSING OR WOULD RESULT IN LESS RISK OF SEDIMENTATION OR OTHER ECOLOGICAL DAMAGE THAN WORK ABOVE THAT ELEVATION.
5. BEFORE ENTERING THE WATER, INSPECT ANY WATERCRAFT, WADERS, BOOTS, OR OTHER GEAR/EQUIPMENT TO BE USED IN OR NEAR WATER AND REMOVE ANY PLANTS, SOIL OR OTHER ORGANIC MATERIAL ADHERING TO THE SURFACE.
6. ENSURE THAT ANY GENERATOR, CRANE OR OTHER STATIONARY HEAVY EQUIPMENT THAT IS OPERATED, MAINTAINED, OR STORED WITHIN 150 FEET OF ANY WATER BODY IS ALSO PROTECTED AS NECESSARY TO PREVENT ANY LEAK OR SPILL FROM ENTERING THE WATER.

ABBREVIATIONS

BP	BEGINNING POINT	NAVD	NORTH AMERICAN VERTICAL DATUM
CFS	CUBIC FEET PER SECOND	NMFS	NATIONAL MARINE FISHERIES SERVICE
CLSM	CONTROLLED LOW STRENGTH MATERIAL	ODFW	OREGON DEPARTMENT OF FISH AND WILDLIFE
CONC	CONCRETE	ODOT	OREGON DEPARTMENT OF TRANSPORTATION
CL	CENTERLINE	OHW	ORDINARY HIGH WATER
DIAM	DIAMETER	PC	POINT OF CURVE
DI	DUCTILE IRON	PI	POINT OF INTERSECTION
DWG	DRAWING	PROP	PROPOSED
E	EASTING	PT	POINT OF TANGENCY
EA	EACH	PVC	POLYVINYL CHLORIDE
EG	EXISTING GRADE	R	RADIUS
EL	ELEVATION	RJ	RESTRAINED JOINT
ELEV	ELEVATION	SCH	SCHEDULE
EP	ENDING POINT	SPEC	SPECIFICATIONS
EX	EXISTING	ST	STORM
FG	FINISHED GRADE	STA	STATION
IE	INVERT ELEVATION	STD	STANDARD
INCL	INCLUDE/INCLUDING	STL	STEEL
GPS	GLOBAL POSITIONING SYSTEM	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
HAT		TCP	TRAFFIC CONTROL PLAN
L	LENGTH	TYP	TYPICAL
LAT	LATITUDE	W	WATER
LF	LINEAR FEET	Δ	CHANGE IN ANGLE
LON	LONGITUDE		
MIN	MINIMUM		
MAX	MAXIMUM		
N	NORTHING		

RH2

EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

GENERAL NOTES

CENTRAL POINT

JOB NO. 1015-083 | CLIENT: CPT | FILENAME: SCO-P-CON DWG
DESIGNED: TWO | DATE: May 8, 2023
REVIEWED: RLB | PLOT DATE: May 8, 2023

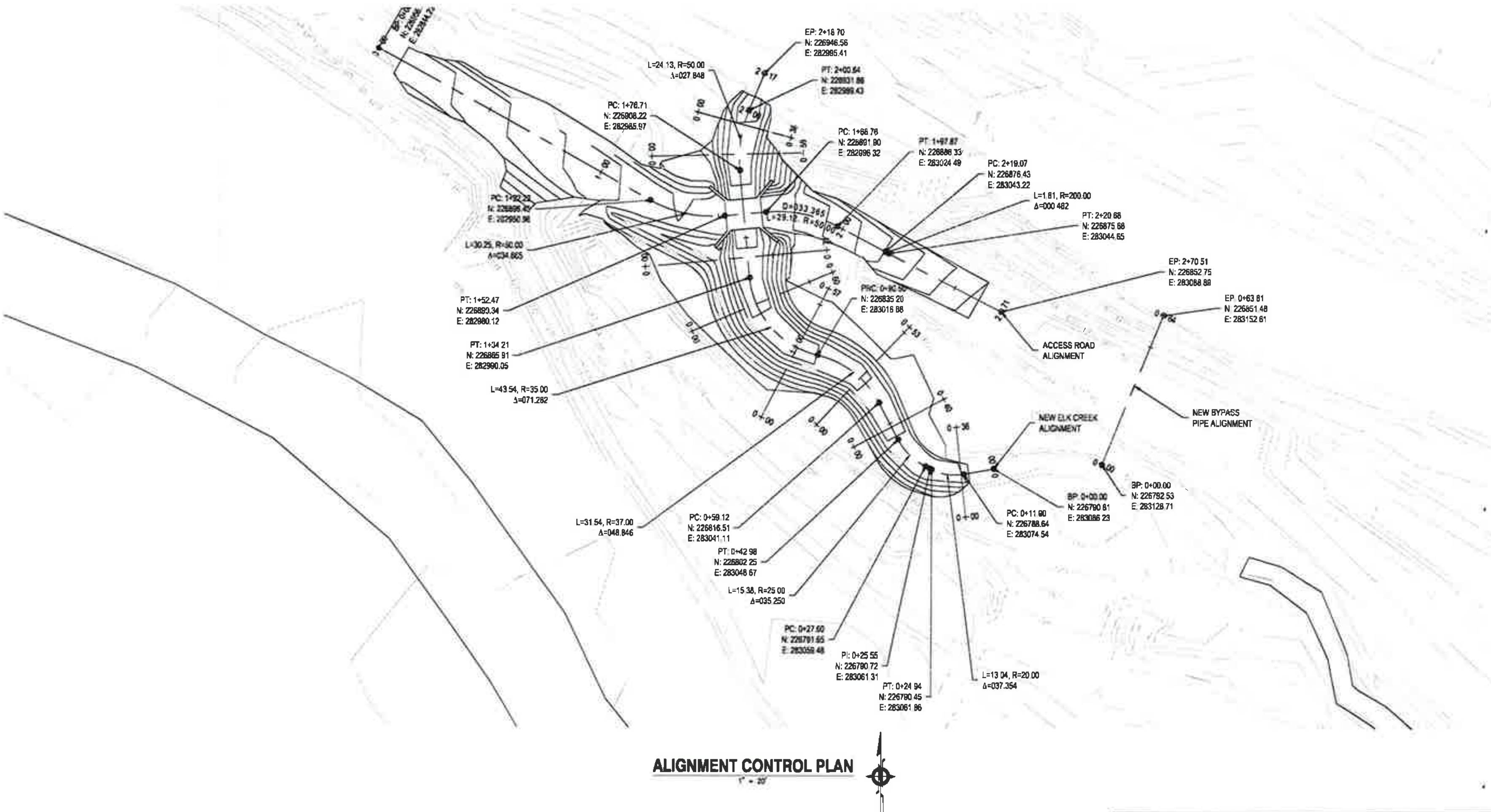
REVISIONS

NO	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO. G01 | SHEET NO. 2 | 12



ALIGNMENT CONTROL PLAN
1" = 20'

SURVEY NOTES

1. TOPOGRAPHIC SURVEY WAS PERFORMED BY NEATHAMER SURVEYING INC, WITH FIELD WORK COMPLETED ON FEBRUARY 1, 2022.
2. THE BASIS OF BEARING FOR THIS SURVEY GEODETIC NORTH REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83 2011) USING THE OREGON COORDINATE REFERENCE SYSTEM GRANTS PASS - ASHLAND ZONE.
3. THE BASIS OF VERTICAL CONTROL FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) (CITY OF CENTRAL POINT) VIA RTK GPS OBSERVATIONS.
4. THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE AND NOT THE RESULT OF A BOUNDARY SURVEY.

RH2

EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

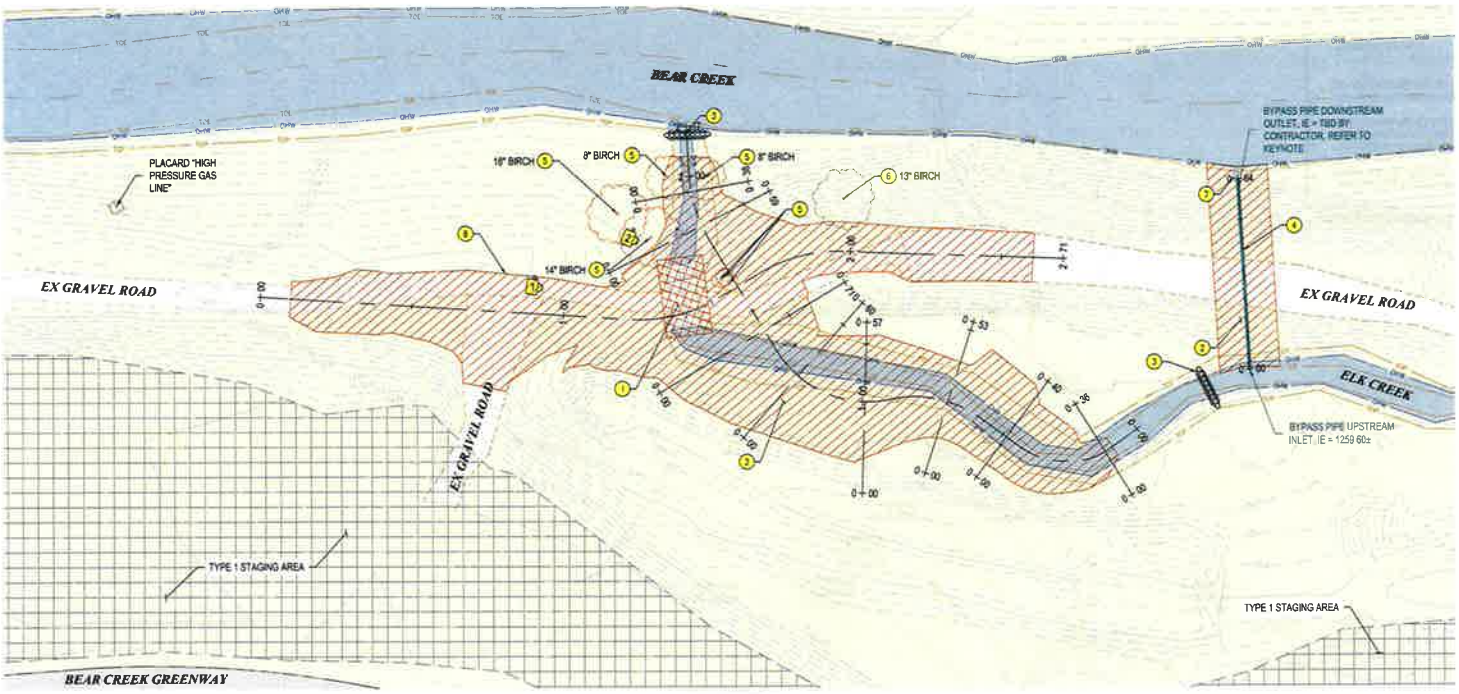
CENTRAL POINT

ALIGNMENT CONTROL

REVISIONS

SCALE: SHOWN

G02 3 12



PLAN VIEW

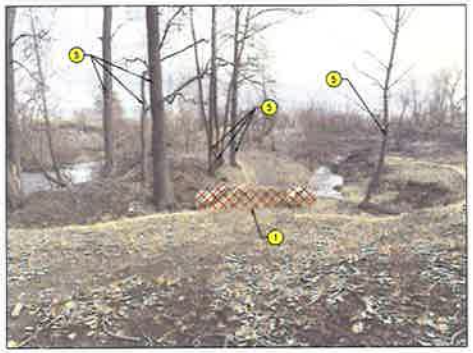
1" = 20'

GENERAL NOTES

1. LOCATION OF EX UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE CITY AND UNDERGROUND SERVICES ALERT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXISTING UTILITY LOCATIONS.
2. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL REMOVE ALL COMPONENTS SHOWN TO BE DEMOLISHED IN THEIR ENTIRETY, AND SHALL PROPERLY DISPOSE OF ALL REMOVED ITEMS.

KEY NOTES

1. REMOVE (2) EXISTING CULVERTS AND GUARDRAIL.
2. CLEAR AND GRUB AREA TO LIMITS SHOWN.
3. ODOT TYPE 4 SANDBAG CHECK DAM APPROX 3' HIGH, REFER TO DETAIL RD1005 ON SHEET D04.
4. 12" DIAMETER BY APPROX 60' LONG TEMPORARY BYPASS PIPE INSTALLED 24" ABOVE THALWEG. ALLOW FOR APPROX 1 CFS BYPASS FLOW TO BEAR CREEK. REFER TO KEYNOTE 7.
5. REMOVE EXISTING TREE(S), SALVAGE FOR USE IN CONSTRUCTING ROOT WAD STRUCTURES.
6. PROTECT EXISTING TREE(S).
7. BYPASS PIPE LANDING POOL. REFER TO DETAIL ON THIS SHEET.
8. REMOVE GRAVEL FROM EX ACCESS ROAD TO LIMITS SHOWN.



CULVERT DEMOLITION

NOT TO SCALE

CULVERT OUTLET DEMOLITION

NOT TO SCALE

BYPASS POOL DEPTH EQUATION:

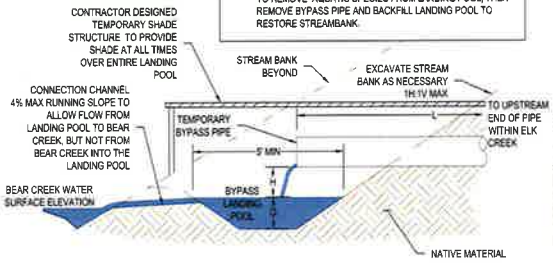
$D = H + (0.0625 \times L)$

WHERE:

D = POND DEPTH
H = HEIGHT OF IE ABOVE POND WATER SURFACE
L = PIPE LENGTH

NOTE:

1. MONITOR PLUNGE POOL TWICE DAILY TO VERIFY THAT PLUNGE POOL CONDITIONS MEET DESIGN REQUIREMENTS AND THAT AQUATIC LIFE IS NOT BECOMING TRAPPED IN LANDING POOL. REPORT ANY ADVERSE CONDITIONS TO THE ENGINEER IMMEDIATELY.
2. MEASURE PLUNGE POOL WATER TEMPERATURE AT OUTLET DAILY, AT THE HOTTEST PART OF THE DAY. IF TEMPERATURE MEASURES 70°F OR HIGHER, REPORT TEMPERATURE TO ENGINEER IMMEDIATELY.
3. UPON PROJECT COMPLETION, COORDINATE WITH ENGINNER TO REMOVE AQUATIC SPECIES FROM LANDING POOL, THEN REMOVE BYPASS PIPE AND BACKFILL LANDING POOL TO RESTORE STREAMBANK.



PLUNGE POOL SIZING DETAIL

NOT TO SCALE

VICINITY MAP

RH2

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

EXISTING & DEMOLITION PLAN

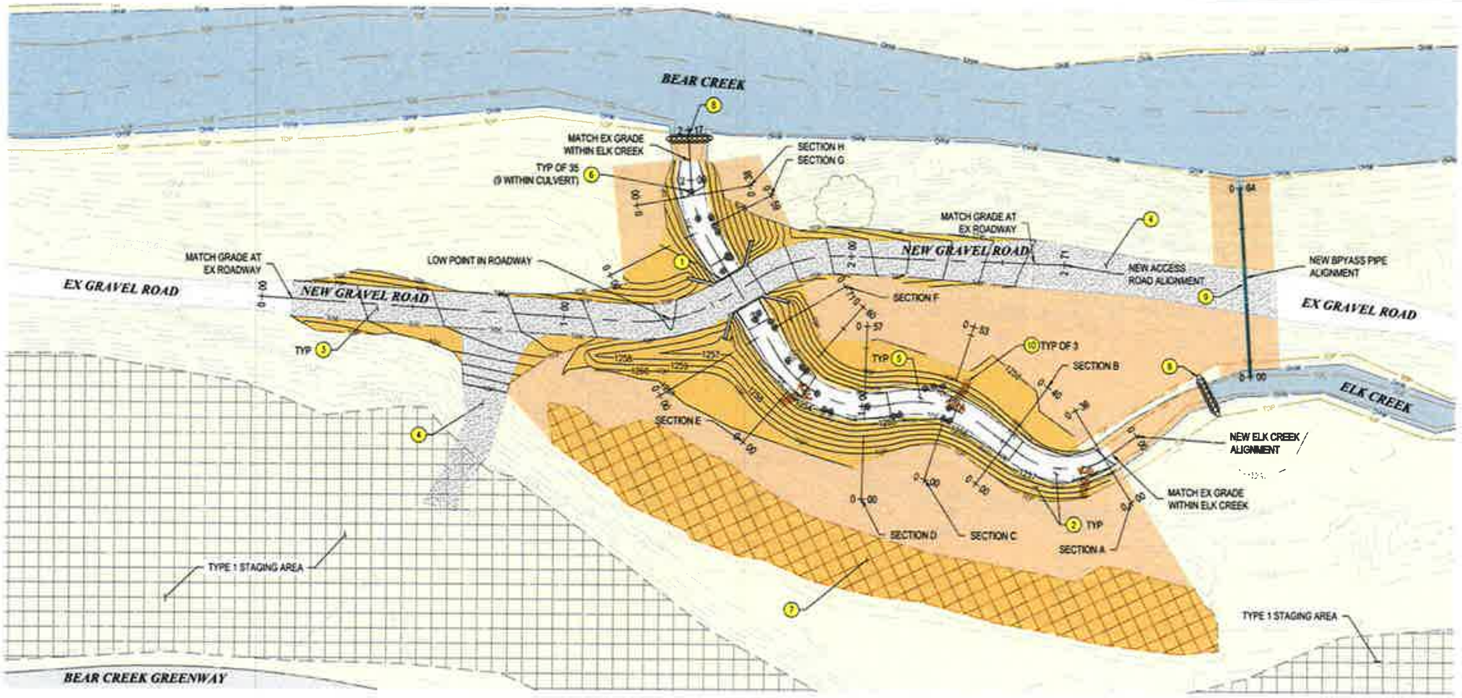
REVISIONS

SCALE: SHOWN

C01 | 4 | 12

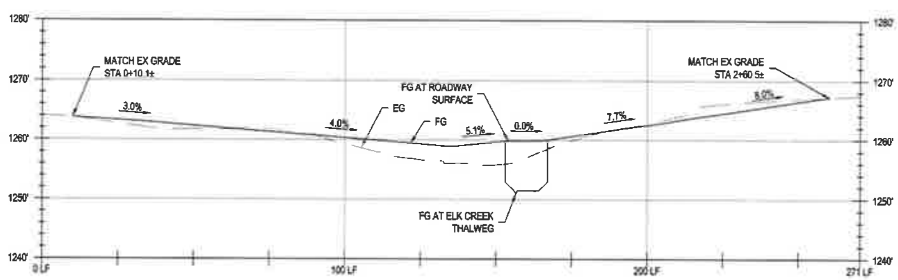
Attachment: Attachment 4 - Floodplain Development Permit Application (1772 : Elk Creek No Rise Certification)

Packet Pg. 52



PLAN VIEW

1" = 20'



ROAD ALIGNMENT PROFILE

H: 1" = 20', V: 1" = 10'

GENERAL NOTES

1. LOCATION OF EX UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE CITY AND UNDERGROUND SERVICES ALERT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXISTING UTILITY LOCATIONS.
2. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.

KEY NOTES

1. INSTALL PRECAST CONC CULVERT WITH WINGWALLS, REFER TO DETAILS ON DRAWINGS D01, D02, & D04.
2. GRADE ALONG NEW ELK CREEK ALIGNMENT ACCORDING TO PROFILE AND SECTIONS SHOWN ON DRAWING C03, AND DETAILS ON DRAWING D02.
3. PERFORM GRADING AND INSTALL ACCESS ROAD, REFER TO ACCESS ROAD PROFILE ON THIS DRAWING.
4. ADD AGGREGATE BASE ROCK TO THE EX ACCESS ROAD AS REQUIRED TO MEET THE SLOPE AND DEPTH REQUIREMENTS SHOWN IN DETAIL 6 ON DRAWING D02.
5. INSTALL STREAMBED MATERIAL TO DEPTH AND GEOMETRY SHOWN IN THIS DRAWING AND THE DETAILS IN DRAWINGS D01 AND D02. REFER TO SPECIFICATIONS FOR SELECTION AND GRADATION REQUIREMENTS.
6. INSTALL LOCALLY SOURCED QUARRIED STREAMBED BOULDER 14"-22" DIAMETER. REFER TO TYPICAL CHANNEL SECTION AND SPECIFICATIONS. BOULDERS SHALL BE MACHINE PLACED AND EMBEDDED INTO STREAMBED MATERIAL. END DUMPING IS NOT ALLOWED.
7. CLEAN NATIVE MATERIAL EXCAVATED FROM WITHIN THE PROJECT FOOTPRINT MAY BE USED AS FILL WITHIN THE EXISTING DEPRESSION AREA SHOWN. GRADE ALL PLACED MATERIAL TO BE UNIFORM AND NO HIGHER THAN ADJACENT AREAS.
8. UPON PROJECT COMPLETION AND ACCEPTED STREAMBED STABILIZATION, REMOVE CHECK DAM ALLOWING STREAM FLOWS TO SLOWLY ENTER THE NEWLY CONSTRUCTED PORTION OF ELK CREEK, TO MINIMIZE TURBIDITY.
9. UPON CHECK DAM REMOVAL, REMOVE BYPASS PIPE. FILL IN THE BYPASS PIPE LANDING POOL AND TRENCH LEFT FROM PIPE REMOVAL WITH NATIVE FILL ACQUIRED ONSITE. ALL FILL SHALL BE COMPACTED TO 92% IN 8" THICK MAX LOOSE LIFTS. COMPACTION IS BASED ON MAXIMUM DRY DENSITY PER ASTM D-698 (STANDARD PROCTOR). RESTORE ALL DISTURBED PORTIONS OF THE STREAM BANKS, STREAM BEDS, GRAVEL ROADWAY, AND OTHER AREAS TO EXISTING OR BETTER CONDITION.
10. INSTALL ROOT WADS IN STREAM BED AT THE APPROX LOCATIONS SHOWN. ROOT WADS TO BE OBTAINED FROM EXISTING TREES TO BE REMOVED OR LOCALLY SOURCED. REFER TO SPECS AND DETAIL 2 ON DRAWING D02.

VICINITY MAP

RH2

EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

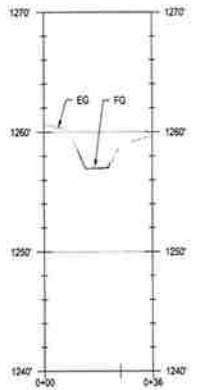
PROPOSED SITE AND GRADING PLAN

REVISIONS

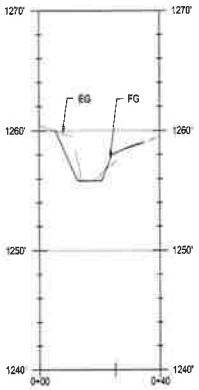
SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO. C02 SHEET NO. 5 of 12



SECTION A
H: 1" = 20', V: 1" = 5'



SECTION B
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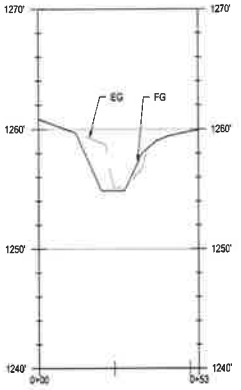
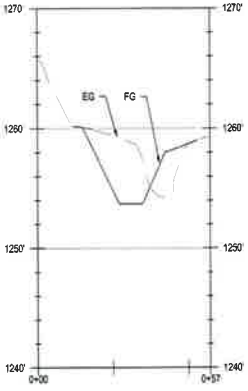


SECTION C
H: 1" = 20', V: 1" = 5'



SECTION D
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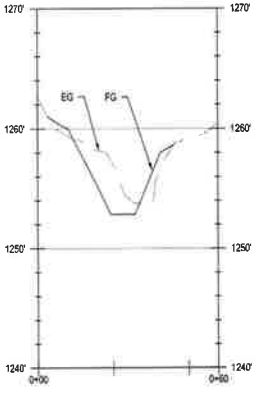

SECTION E
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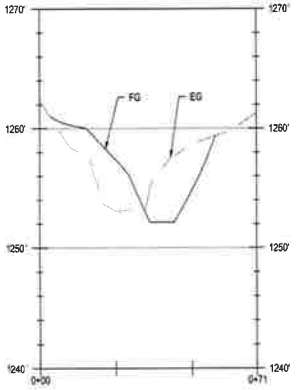

SECTION F
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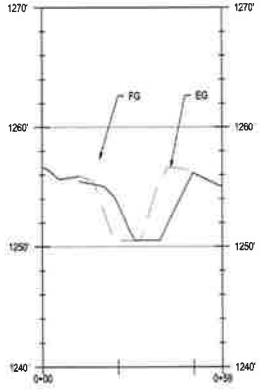

SECTION G
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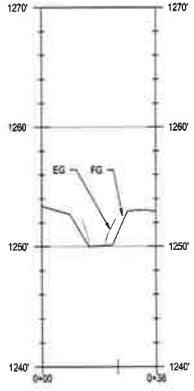

SECTION H
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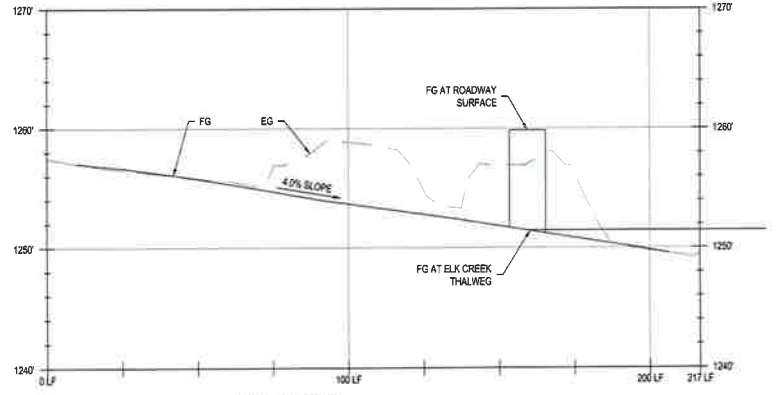


ELK CREEK ALIGNMENT PROFILE
H: 1" = 20', V: 1" = 5'

RH2

REGISTERED PROFESSIONAL ENGINEER
OREGON
EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

PROPOSED STREAMBED SECTIONS

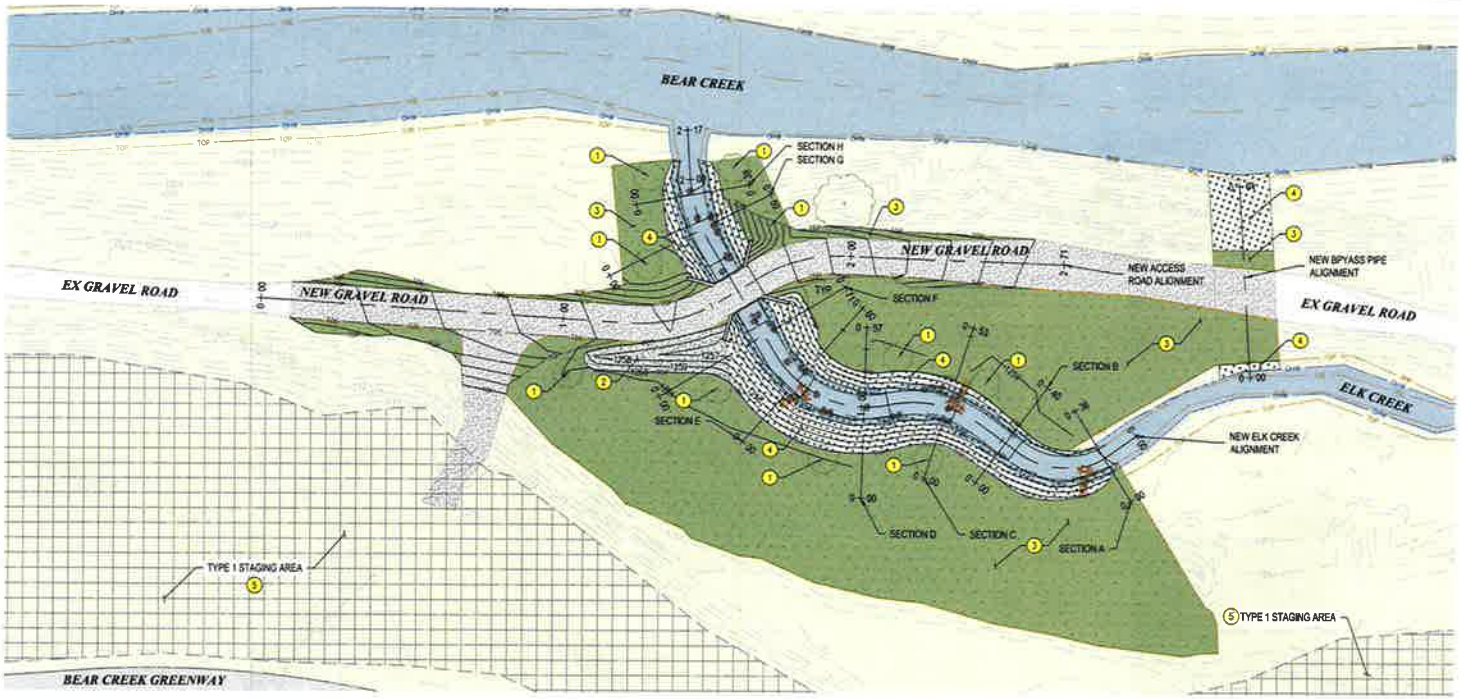
REVISIONS

NO	DESCRIPTION	DATE	BY

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO: C03
SHEET NO: 6 of 12



PLAN VIEW
1" = 20'

GENERAL NOTES

1. LOCATION OF EX UTILITIES AND STRUCTURES ARE FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY THE CITY AND UNDERGROUND SERVICES ALERT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXISTING UTILITY LOCATIONS.
2. ALL TREES, STRUCTURES, UTILITIES, EQUIPMENT, AND ALL OTHER ITEMS NOT INDICATED TO BE DISCONNECTED AND/OR REMOVED SHALL REMAIN AND BE PROTECTED UNLESS OTHERWISE NOTED.
3. LOOSEN ALL SOILS OUTSIDE OF PERMANENT ACCESS ROADS TO RESTORE SOIL PERMEABILITY. SEED ALL DISTURBED EARTH AREAS, INCLUDING PLANTED AREAS WITH NATIVE SEED MIX, REFER TO GENERAL NOTES SHEET, AND PLANTING DETAILS AND NOTES ON SHEET D03.

KEY NOTES

1. PLANT OREGON ASH TREES IN APPROX. LOCATIONS SHOWN.
2. PLANT SCOURING RUSH AND SEED WITH NATIVE SEED MIX WITHIN AREA SHOWN.
3. PLANT MIX OF SNOWBERRY, SWORD FERN, OREGON GRAPE, AND PACIFIC BLACKBERRY AND SEED WITH NATIVE SEED MIX WITHIN AREA SHOWN.
4. INSTALL ODOT TYPE E EROSION CONTROL MATTING AND PLANT LIVE STAKE WILLOW PLANTINGS AND SEED WITH NATIVE SEED MIX WITHIN AREA SHOWN.
5. SEED ALL STAGING AREAS AND ALL OTHER DISTURBED AREAS WITH NATIVE SEED MIX.

VICINITY MAP

RH2

REGISTERED PROFESSIONAL ENGINEER
OREGON
EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

FINAL RESTORATION PLAN

REVISIONS

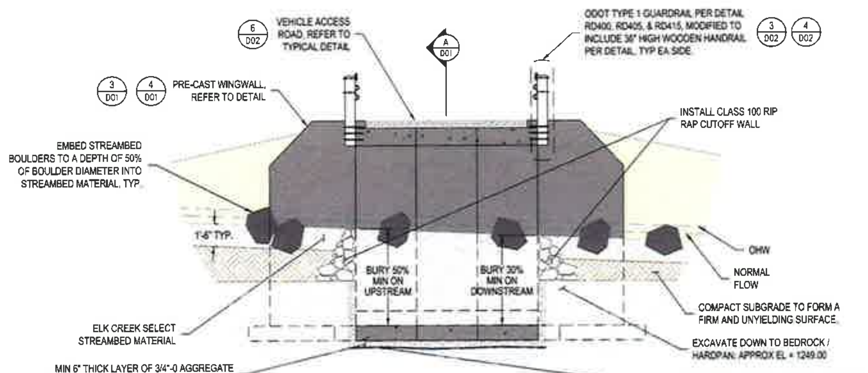
SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

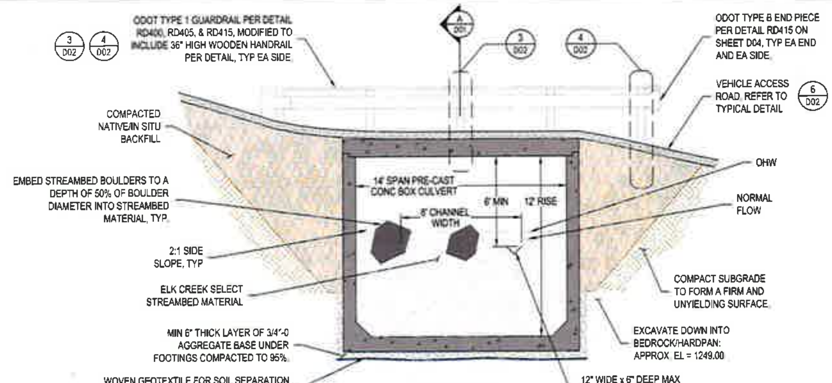
DRG. NO. C04
SHEET NO. 7 12

Attachment: Attachment 4 - Floodplain Development Permit Application (1772 : Elk Creek No-Rise Certification)

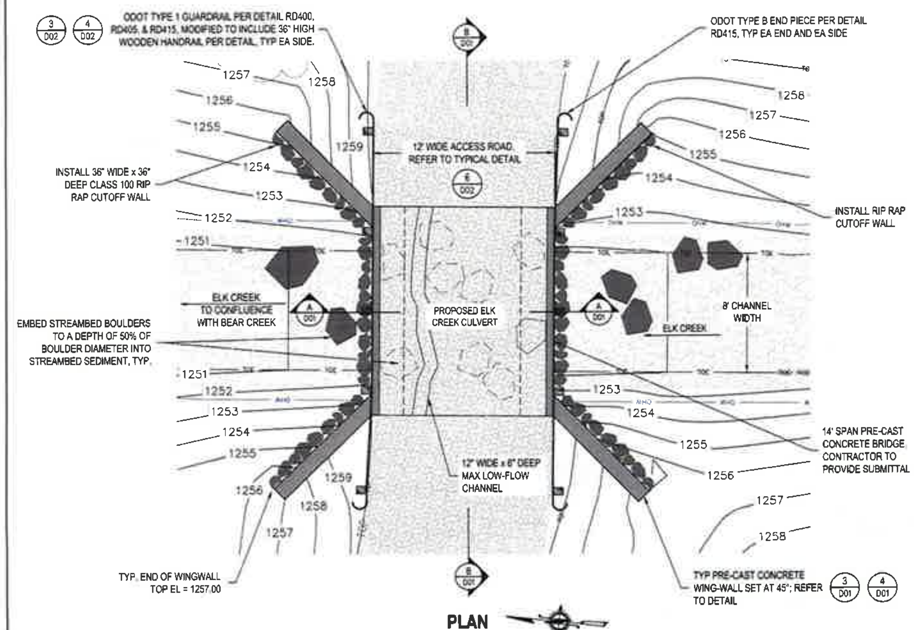
Packet Pg. 99



SECTION A



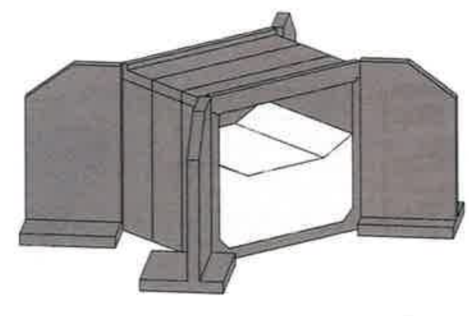
SECTION B



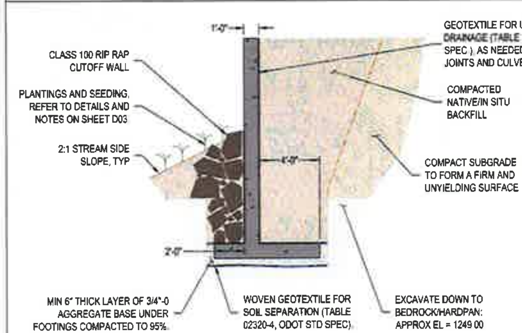
PLAN

NOTES:
1. CULVERT IS BASED UPON THE PROVISIONS OF THE *ANADROMOUS SALMONID PASSAGE FISH FACILITY DESIGN* PUBLISHED BY THE NATIONAL MARINE FISHERIES SERVICE NORTHWEST REGION, AND THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

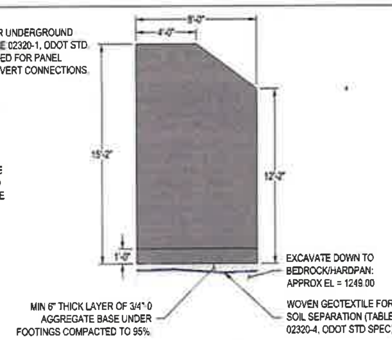
(1 / D01) **PRE-CAST CONCRETE BOX CULVERT INSTALLATION**
NOT TO SCALE



(2 / D01) **PRE-CAST CONCRETE BOX CULVERT OBLIQUE**
NOT TO SCALE



(3 / D01) **WINGWALL SECTION**
NOT TO SCALE



(4 / D01) **WINGWALL PANEL DETAIL**
NOT TO SCALE

RH2

EXPIRES: 12/31/2023

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

CENTRAL POINT

DETAILS - SHEET 1 OF 5

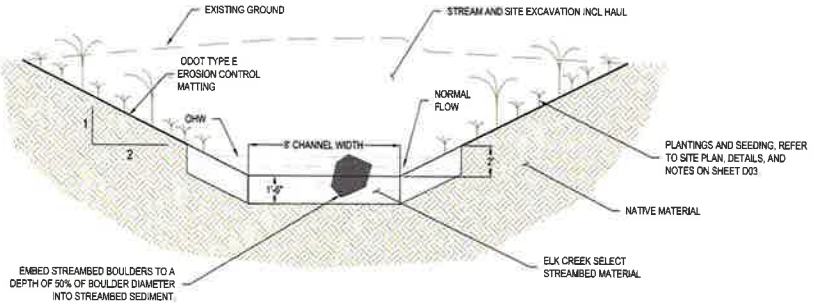
REVISIONS

NO	DATE	DESCRIPTION	BY	REVIEW

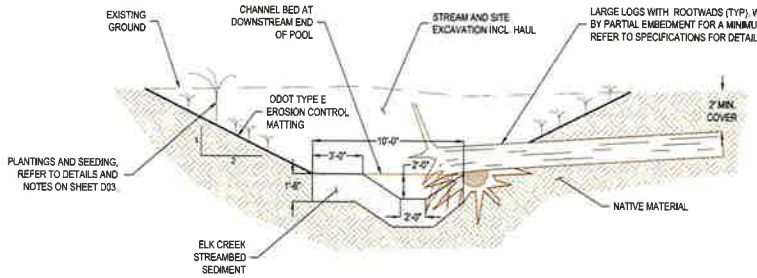
DESIGNED TWD | DATE May 25, 2023
REVIEWED RLB | DATE May 25, 2023
CLIENT CPT | FILENAME ECG-D01.DWG
JOB NO. 1015.093

SCALE: SHOWN
DRAWING IS FULL SCALE WHEN BAR MEASURES 1"

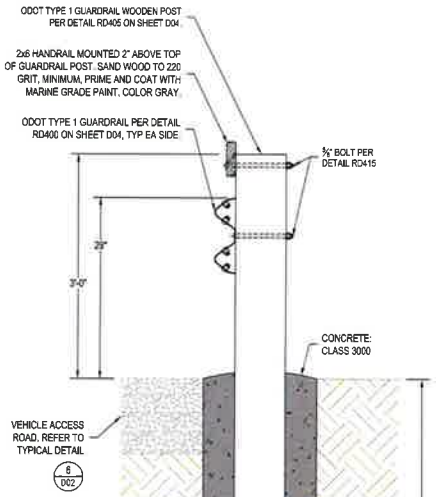
DWG NO. D01 | SHEET NO. 8 / 12



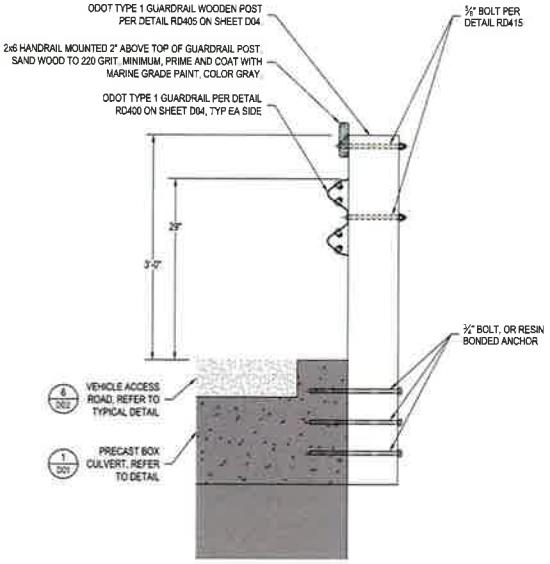
1 D02 TYP. STREAM SECTION
NOT TO SCALE



2 D02 POOL AND ROOT WAD SECTION
NOT TO SCALE

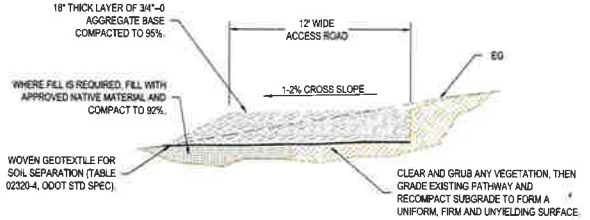


3 D02 GUARDRAIL POST CULVERT MOUNTING
NOT TO SCALE



4 D02 GUARDRAIL POST IN GROUND INSTALLATION
NOT TO SCALE

5 D02 EXISTING CHANNEL RESTORATION
NOT TO SCALE



NOTES:
1. ALL FILL SHALL BE COMPACTED IN 8-INCH THICK MAX LOOSE LIFTS. COMPACTION IS BASED ON MAXIMUM DRY DENSITY PER ASTM D-698 (STANDARD PROCTOR).
2. CUT AND FILL SLOPES SHALL BE 3:1 MAX.

6 D02 TYPICAL VEHICLE ACCESS ROAD
NOT TO SCALE

RH2

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

DETAILS - SHEET 2 OF 5

REVISIONS

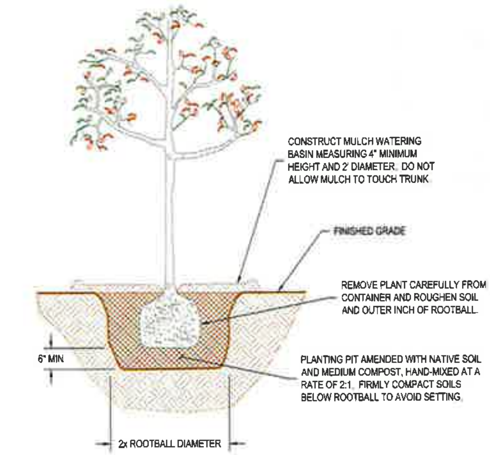
SCALE SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DRG NO: D02 SHEET NO: 9 12

Packet Pg. 57

Attachment: Attachment 4 - Floodplain Development Permit Application (1772 : Elk Creek No-Rise Certification)



1 / D03 **DECIDUOUS TREE PLANTING DETAIL**

NOT TO SCALE

2 / D03 **LIVE STAKE OR POLE PLANTING DETAIL**

NOT TO SCALE

LIVE STAKE OR POLE PLANTING INSTRUCTIONS

1. LIVE STAKES SHALL BE ¾ TO 1½ INCHES IN DIAMETER OVER THEIR ENTIRE LENGTH AND A MINIMUM OF 3 FEET LONG. LIVE POLES SHALL BE 1-4 INCHES IN DIAMETER OVER THEIR ENTIRE LENGTH AND 3-5 FEET LONG. STAKES SHALL BE PROVIDED WITH THE END TO BE PLANTED ANGLED AS SHOWN IN THE DETAIL.
2. LIVE STAKES AND POLES SHALL BE INSTALLED BY HAND. A PILOT HOLE SHALL BE DUG PRIOR TO INSTALLATION (USE SIMILARLY SIZED REBAR, T-BAR, OR HAND AUGER FOR MAKING PILOT HOLES).
3. LIVE STAKES ARE HIGHLY PERISHABLE AND MUST BE STORED IN SHADED, COOL, MOIST CONDITIONS PRIOR TO INSTALLATION. STAKES STORED SHALL BE COVERED IN BURLAP AND WETTED DAILY. STORE STAKES IN THIS MANNER FOR NO LONGER THAN TWO DAYS.
4. INSTALL STAKES SO THAT A MINIMUM OF ⅔ OF THEIR LENGTH IS BURIED IN SOIL. BACKFILL PIT PER DETAILS THIS PAGE AND PACK SOIL AROUND STAKE FOLLOWING INSTALLATION.

PLANTING AND SEEDING NOTES

GENERAL PLANTING NOTES:

ALL AREAS DISTURBED BY CONSTRUCTION, INCLUDING THOSE SPECIFIC PLANTING AREAS SHOWN, SHALL BE REVEGETATED. PLANTING WILL OCCUR DURING THE IN-WATER WORK WINDOW FROM JUNE 15 TO AUGUST 31 AFTER CONSTRUCTION IS COMPLETE. PLANTING WILL BE DONE BY HAND. SEEDING WILL BE ACCOMPLISHED BY BROADCASTING OR HYDROSEEDING WHEN SOIL MOISTURE IS AVAILABLE (FALL). ANY DEVIATION FROM THE PLANTING PLAN MUST BE APPROVED BY THE CITY AND/OR CITY'S REPRESENTATIVE.

ALL PLANTING SHALL BE COMPLETED BY A LOCAL, LANDSCAPE CONTRACTOR WITH AT LEAST 5 YEARS OF EXPERIENCE IN NATIVE PLANT AND SENSITIVE AREAS RESTORATION. INVASIVE SPECIES REMOVAL AND TREATMENT SHALL ALSO BE COMPLETED BY A LANDSCAPE CONTRACTOR LICENSED AND EXPERIENCED IN THE LATEST TREATMENT METHODOLOGY.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING A PRE-PLANTING MEETING, SUCCESSFUL PLANT INSTALLATION, CITY ACCEPTANCE POST-PLANTING, CREATING AN AS-BUILT DRAWING SHOWING PLANT LOCATIONS FOLLOWING INSTALLATION, AND CARING FOR THE SITE FOR A 12-MONTH PLANT ESTABLISHMENT PERIOD. FOLLOWING THE PLANT ESTABLISHMENT PERIOD, THE CITY WILL ASSUME CARE OF THE SITE.

REVEGETATION SEQUENCING:

REVEGETATION ACTIVITIES SHALL OCCUR PER THE FOLLOWING GENERAL SEQUENCE:

1. PRE-PLANTING MEETING: PRIOR TO PLANT INSTALLATION, THE LANDSCAPE CONTRACTOR, CITY AND/OR CITY'S REPRESENTATIVE SHALL MEET ON-SITE TO ENSURE THE PLANS AND SPECIFICATIONS ARE REVIEWED, AND ALL PARTIES UNDERSTAND THE REQUIREMENTS OF LANDSCAPE ACTIVITIES. PLANT LOCATION PLACEMENT SHALL BE COMPLETED WITH THE ON-SITE DIRECTION OF THE CITY AND/OR CITY'S REPRESENTATIVE.
2. INSTALLATION: COMPLETE PLANT INSTALLATION BY HAND IN ACCORDANCE WITH THE APPROVED PLANTING PLAN AND DETAILS.

   OREGON ASH (*Fraxinus latifolia*) TREES WILL BE PLANTED ALONG THE BANKS ABOVE THE OHW. ALL TREES INSTALLED SHALL RECEIVE A 4-INCH HIGH BY 2-FOOT DIAMETER HAND-PACKED MULCH WATERING BASIN.

   WILLOW STAKES WILL BE PLANTED ON BANKS OF RESTORED CHANNEL, AS SHOWN ON THE PLANS.

   SCOURING RUSH (*Equisetum hyemale*) SHALL BE PLANTED WITHIN THE LOW-LYING AREAS SHOWN ON THE PLANS.

   UPLAND AREAS WILL BE PLANTED WITH A MIX OF SNOWBERRY (*Symphoricarpos albus*), SWORD FERN (Polystichum munitum), OREGON GRAPE (*Mahonia aquifolium*), AND PACIFIC BLACKBERRY (*Rubus ursinus*), AS SHOWN ON THE PLANS.

   THE UNDERSTORY AND DISTURBED SOIL AREAS WILL BE BROADCAST SEEDED WITH A NATIVE NORTHWEST GRASS SEED MIX. THE SEED MIX WILL BE APPLIED AT A RATE OF 15 POUNDS PER ACRE (1,406,000 SEEDS PER POUND; SPACING OF 161 SEEDS PER SQUARE FOOT) OR THE RECOMMENDATIONS OF THE SEED DISTRIBUTOR. REMOVE NOXIOUS WEEDS PRIOR TO SEEDING. MAINTENANCE OF NOXIOUS WEEDS FOR FIRST THREE YEARS AFTER RESTORATION WILL BE COMPLETED BY THE CITY.
3. CLEAN-UP: THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF REMOVED PLANTS AND PLANT PARTS, CONTAINERS, BURLAP, ETC. ASSOCIATED WITH PLANTING ACTIVITIES. THESE MATERIALS SHALL BE DISPOSED OF OFF-SITE.
4. CONSTRUCTION INSPECTION: UPON COMPLETION OF INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL REQUEST AN INSPECTION FROM THE CITY. INSPECTIONS WILL BE CONDUCTED TO ENSURE INSTALLATION COMPLIES WITH THE APPROVED PLANTING PLAN AND DETAILS. THE CONTRACTOR WILL BE REQUIRED TO CORRECT ANY DERIVATIONS PRIOR TO CITY ACCEPTANCE.

IRRIGATION:

THE LANDSCAPE CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION FOR THE PROPOSED PLANTING AREA. TEMPORARY IRRIGATION MAY BE SUPPLIED USING A WATER TRUCK, HOSE, OR ABOVEGROUND IRRIGATION SYSTEM. THE CONTRACTOR WILL NEED TO ACCESS WATER VIA THE NEAREST HYDRANT, AND SECURE THE APPROPRIATE HYDRANT PERMIT AND A HYDRANT METER FROM THE CITY FOR THIS PURPOSE. TEMPORARY IRRIGATION SHALL PROVIDE HEAD-TO-HEAD COVERAGE OF THE PROPOSED PLANTING AREA. ALL TREES AND SHRUBS IN THIS ZONE WILL RECEIVE TEMPORARY IRRIGATION DURING THE DRY SEASON AND AS NECESSARY FOR SUCCESSFUL PLANT ESTABLISHMENT. TREES SHALL RECEIVE A MINIMUM OF 2 INCHES OF WATER PER WEEK. THE LANDSCAPE CONTRACTOR SHALL MODIFY THE DURATION AND FREQUENCY OF SUPPLEMENTAL WATERING, AS NEEDED. THE LANDSCAPE CONTRACTOR SHALL REMOVE TEMPORARY IRRIGATION SYSTEM COMPONENTS AND/OR HOSING FOLLOWING PLANT ESTABLISHMENT PERIOD.

PLANTINGS

TYPE	QUANTITY	SIZE / DENSITY
OREGON ASH (Fraxinus latifolia)	10	5 GALLON/MIN 12 FT SEPARATION
WILLOW STAKES (VARIOUS SPECIES)	3,340 SQ. FT.	1 PER 6 SQ. FT.
SCOURING RUSH (Equisetum hyemale)	515 SQ. FT.	1 GAL @ 1 PER 6 SQ. FT.
SNOWBERRY (Symphoricarpos albus)	17,400 SQ. FT.	1 GAL @ 1 PER 24 SQ. FT.
SWORD FERN (Polystichum munitum)	17,400 SQ. FT.	1 GAL @ 1 PER 24 SQ. FT.
OREGON GRAPE (Mahonia aquifolium)	17,400 SQ. FT.	1 GAL @ 1 PER 24 SQ. FT.
PACIFIC BLACKBERRY (Rubus ursinus)	17,400 SQ. FT.	1 GAL @ 1 PER 24 SQ. FT.
SEED MIX	0.49 ACRES*	15 LBS PER ACRE

*AREA QUANTITY DOES NOT INCLUDE STAGING AREAS NOR OTHER DISTURBED AREAS.

NORTHWEST GRASS SEED MIX

COMMON NAME	SCIENTIFIC NAME	INDICATOR
TUFTED HAIRGRASS	DESCHAMPSIA CESPITOSA	FACW
SLENDER HAIRGRASS	DESCHAMPSIA ELONGATA	FACW
MEADOW BARLEY	HORDEUM BRACHYANTHERUM	FACW
SPIKE BENTGRASS	AGROSTIS EXERATA	FACW
COMMON RUSH	JUNCUS EFFUSUS	FACW
NEBRASKA SEDGE	CAREX NEBRASCENSIS	OBL

RH2

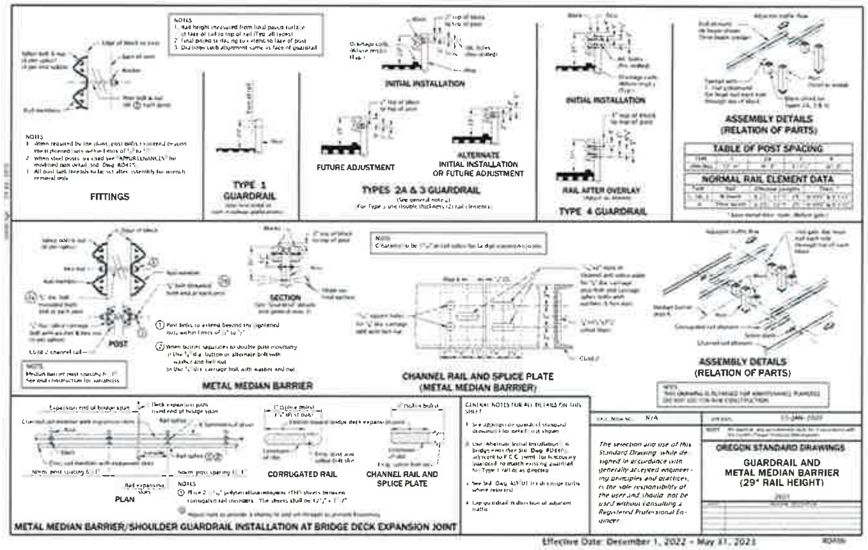
CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

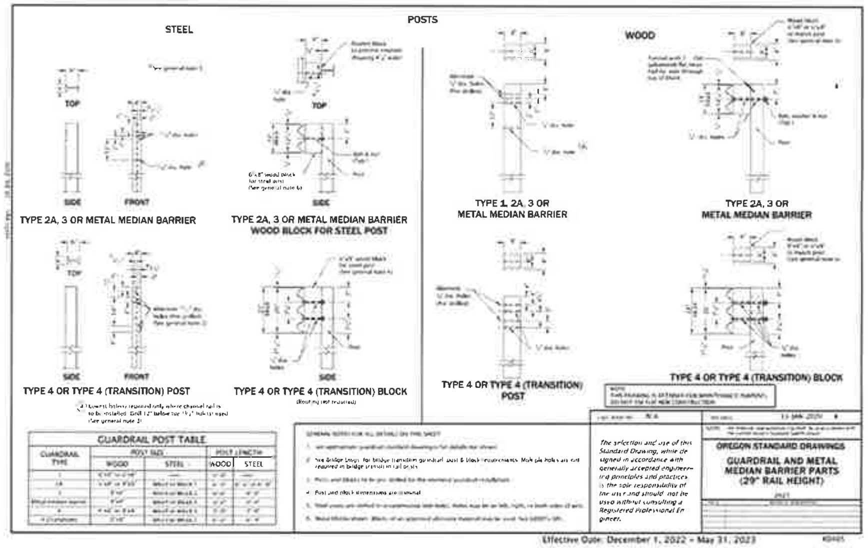
DETAILS - SHEET 3 OF 5

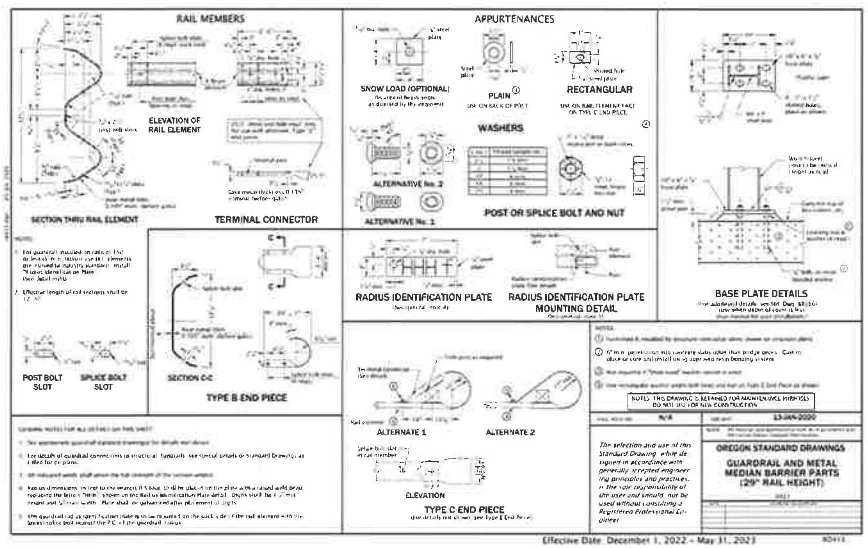
REVISIONS

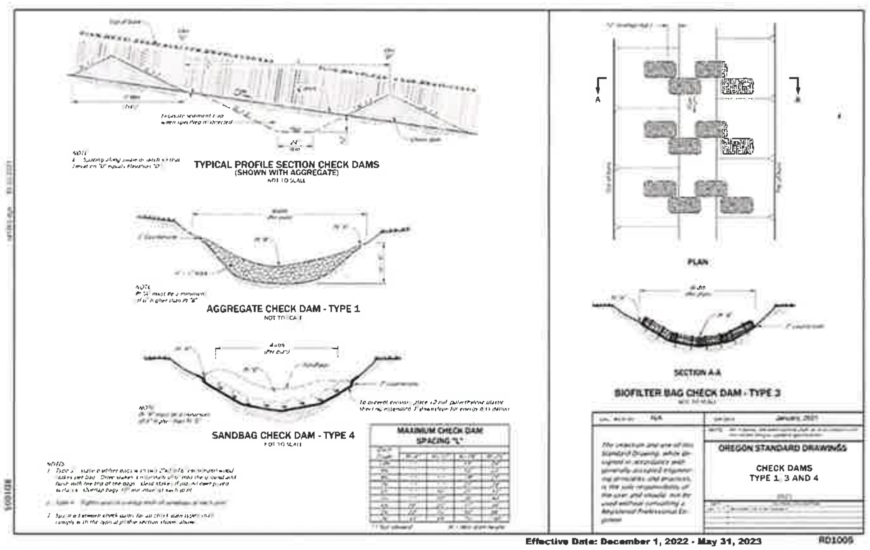
SCALE: SHOWN

DWG NO. D03 SHEET NO. 10 / 12









RH2

EXPIRES: 12/31/2023

CENTRAL POINT

CITY OF CENTRAL POINT

ELK CREEK CULVERT REPLACEMENT

DETAILS - SHEET 4 OF 5

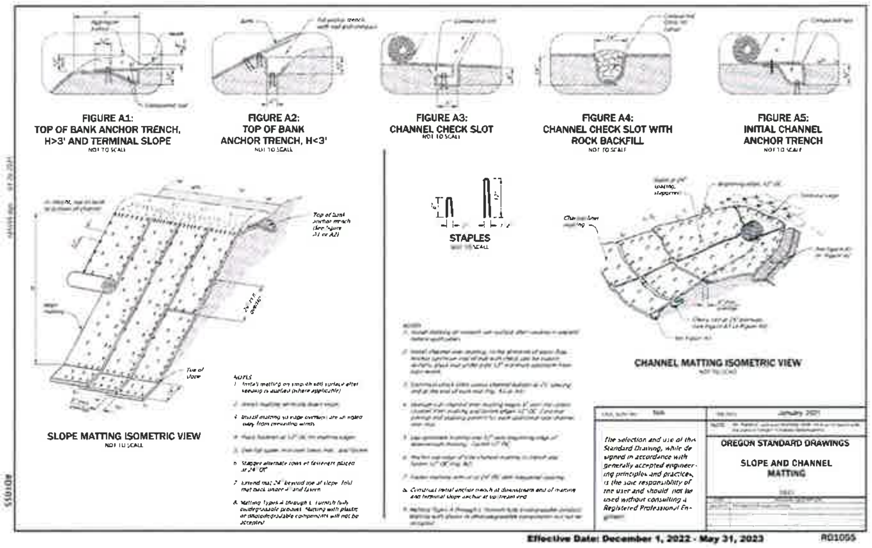
REVISIONS

SCALE: SHOWN

D04

11

12



RH2

EXPIRES: 12/31/2023

CENTRAL POINT

CITY OF CENTRAL POINT
ELK CREEK CULVERT REPLACEMENT

DETAILS - SHEET 5 OF 5

REVISIONS

NO	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

D05 | 12 | 12

ATTACHMENT 5

RESOLUTION NO. 914

A RESOLUTION APPROVING A FLOODPLAIN DEVELOPMENT PERMIT/NO-RISE CERTIFICATE FOR CULVERT REPLACEMENT AND CHANNEL IMPROVEMENTS WITHIN THE ELK CREEK FLOODWAY

(File No: FP-23004)

WHEREAS, the applicant has submitted a Floodplain Development application and No-Rise Certification to complete improvements in the channel of Elk Creek to establish a natural channel and improve flows in the creek by replacing an existing culvert.

WHEREAS, the No-Rise Certification was prepared in accordance with FEMA's Guidance for "No-Rise/No-Impact" Certification for Proposed Developments in Regulatory Floodways; and

WHEREAS, the No-Rise Certification confirms that the proposed improvements will not increase the base flood elevation or floodway profiles relative to the effective FEMA mapping; and

WHEREAS, on December 5, 2023, at a duly noticed public hearing, the City of Central Point Planning Commission considered the Applicant's request for floodplain development approval for the Elk Creek Floodplain Development Permit/No Rise Certification (the "Project"); and,

NOW, THEREFORE, BE IT RESOLVED that the City of Central Point Planning Commission by Resolution No. 914 hereby approves the Elk Creek Floodplain Development Permit/No-Rise Certification based on the Staff Report dated December 5, 2023, including all attachments thereto hereby incorporated by reference (Exhibit "A"); and

PASSED by the Planning Commission and signed by me in authentication of its passage this 5th day of December, 2023.

_____
Planning Commission Chair

ATTEST:

_____
City Representative

PLANNING
CITY OF CENTRAL POINT, OREGON

Staff Report

Climate Friendly Area (CFA) Study
1773

December 5, 2023

Item Summary
Presentation of the Climate Friendly Area (CFA) Study prepared by the Rogue Valley Council of Governments in partnership with the City.

Staff Source
Stephanie Powers, Planning Director

Background
The City of Central Point and Rogue Valley Council of Governments completed a study of potential CFA locations (Attachment 1) in the City as necessary to comply with the Climate Friendly & Equitable Communities rulemaking in Oregon Administrative Rule (OAR) 660-012-0310(2). The rules aim to encourage climate-friendly development whereby residents, workers and visitors can meet most of their daily needs without having to drive. The rules facilitate this by requiring a high concentration of housing and employment within a multimodal CFA area, which is similar to the City's Transit Oriented Development (TOD) areas. Specifically, a CFA must:

- Contain 30% of the City's housing need;
- Be at least 25 acres in size and 750-ft wide;
- Support mixed-use development consistent with the requirements in OAR 660-012-0320;
- Be within existing or planned urban centers, such as downtowns, neighborhood centers, transit corridors or other similar districts; and,
- Be served by or planned to be served by high quality bicycle, pedestrian and transit services.

The CFA Study identified two (2) potential CFA boundary scenarios and included community engagement, equity analysis and anti-displacement mitigation strategy analysis.

At the December 5, 2023 meeting, staff will present the CFA Study to the Planning Commission as an informational item. The study has no legal requirement for the City at this time. Its purpose is to support our ability to designate a CFA by the end of 2024. Next steps include presentation to City Council for their acknowledgement acceptance, and submittal to the Department of Land Conservation and Development Department for review and approval. Once approved by DLCD, the City is required adopt CFA land use and zoning map and text amendments by December 31, 2024.

Action

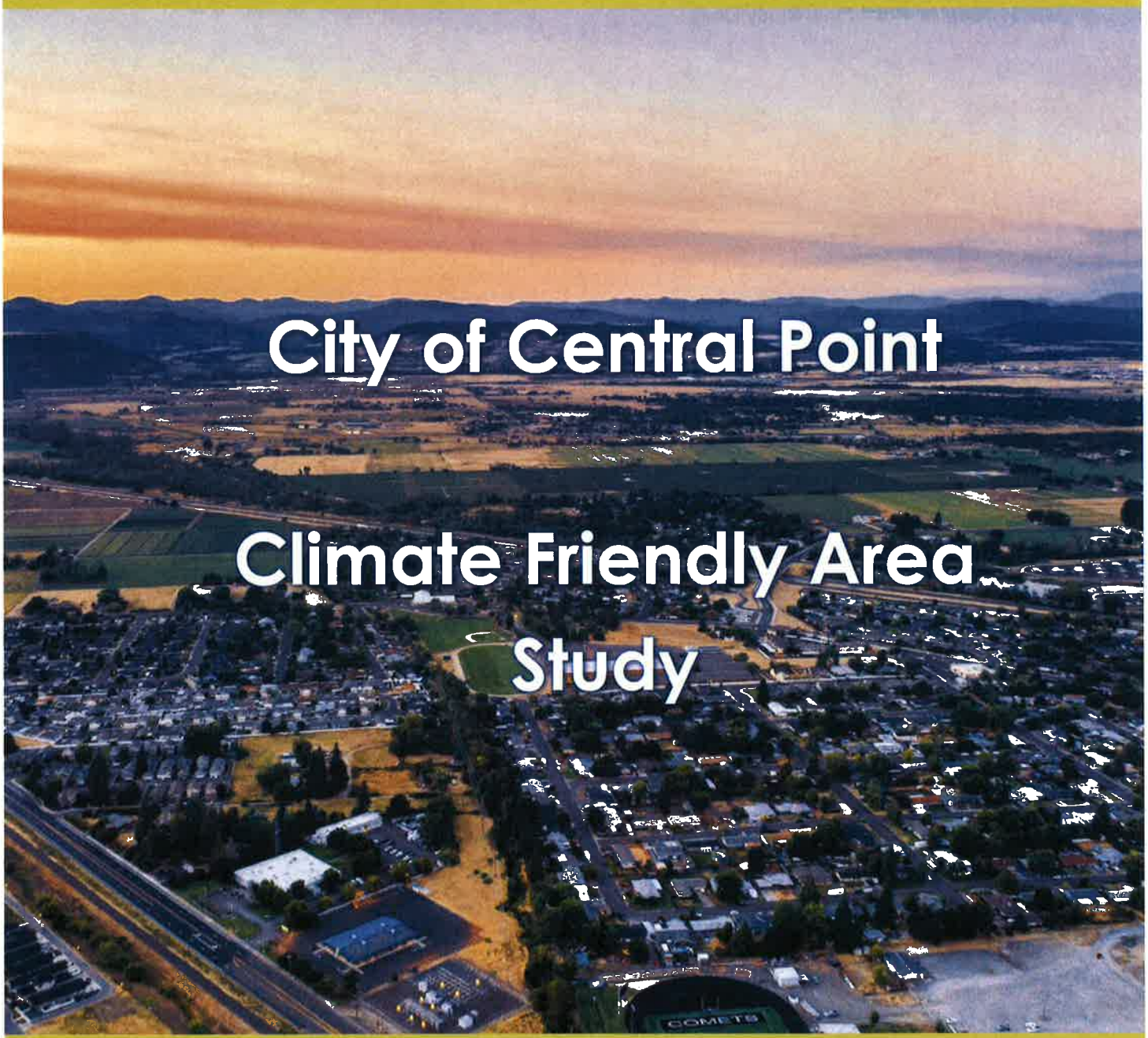
No action is required by the Planning Commission. This is an informational item. Future meeting agendas will include land use applications to designate a CFA and adopt implementing regulations.

ATTACHMENTS:

1. Central Point Final Study Draft

Rogue Valley
Council of Governments

155
P.O. Box 3275
Central Point, OR 97502
(541) 664-6674
Fax (541) 664-7927



City of Central Point

Climate Friendly Area Study

Produced by the Rogue Valley Council of Governments, in collaboration with the City of Central Point and 3J Consulting

2023

Climate Friendly Area Project Staff

Stephanie Holtey, Planning Director, City of Central Point

James Schireman, Associate Land use Planner, RVCOG

Yazeed Alrashdi, Associate Transportation Planner, RVCOG

Scott Fregonese, Senior Project Manager, 3J Consulting

Disclaimer:

The following study analyzes CFA candidates within the City of Central Point and explores paths forward and potential scenarios should the city designate a Climate Friendly Area. By no means does this study alter the current zoning, land uses, or other development regulations governed by the City of Central Point.

Contents

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Chapter 1: Climate Friendly Area Regulations and Methodology Background

Introduction

Rogue Valley Council of Governments, in collaboration with the City of Central Point and the project consultant 3J, is conducting a study of potential Climate Friendly Areas (CFA) in accordance with the Climate Friendly and Equitable Communities (CFEC) rulemaking (OAR 660-012-0310), which was initiated by the Land Conservation and Development Commission (LCDC) in response to Governor Brown's Executive Order 20-04 directing state agencies to take urgent action to meet Oregon's climate pollution reduction targets. The rules encourage climate-friendly development by facilitating areas where residents, workers, and visitors can meet most of their daily needs without having to drive. A CFA aims to contain a variety of housing, jobs, businesses, and services. A CFA also supports alternative modes of transit by being in close proximity to high-quality pedestrian, bicycle, and transit infrastructure.

Phase 1 of this project is the CFA study identifies candidate CFAs and analyzes what zones are most aligned to the CFEC rules, and what adjustments of them would be required.

Phase 2 will encompass the adoption of any necessary changes and the incorporation of a climate-friendly comprehensive plan element. Cities may use CFA areas from the study or any other qualifying area.

Climate Friendly and Equitable Communities Rulemaking

The Climate-Friendly and Equitable Communities rulemaking is part of Oregon's longstanding effort to reduce pollution from the transportation system, especially greenhouse gases that are causing a change in climate and associated weather-related disruptions, including drought, wildfires, and warming temperatures with greater variation overall.

The rules encourage climate-friendly development in Climate-Friendly Areas (CFAs). Other provisions of the rulemaking call for new buildings to support the growing electric vehicle transformation, reduce one-size-fits-all parking mandates, and increase local planning requirements to address critical gaps in our walking, biking, and transit networks. The rules ask communities to identify transportation projects needed to meet our climate goals.

Climate Friendly Areas Overview

A CFA is an area where residents, workers, and visitors can meet most of their daily needs without having to drive. They are urban mixed-use areas that contain, or are planned to contain, a greater mix and supply of housing, jobs, businesses, and services. These areas are served, or planned to be served, by high quality pedestrian, bicycle, and transit infrastructure to provide frequent, comfortable, and convenient connections to key destinations within the city and region. CFAs typically do not require large parking lots and are provided with abundant tree canopy.

A key component of Oregon's plan to meet our climate pollution reduction and equity goals is facilitating development of urban areas in which residents are less dependent on the single occupant vehicle. Before the automobile became common in American life, cities grew more efficiently, with a variety of uses in city centers and other areas that allowed for working, living, and shopping within a walkable or transit accessible area. Over the last 100 years, the automobile and planning practices have served to separate activities, creating greater inequities within cities and widespread dependence upon climate-polluting vehicles to meet daily needs. CFAs will help to reverse these negative trends, with some actions taking place in the short term, and others that will occur with development and redevelopment over time.

The rules require cities (and some urbanized county areas) with a population over 5,000, and that are located within Oregon's seven metropolitan areas outside of the Portland metropolitan area, to adopt regulations allowing walkable mixed-use development in defined areas within their urban growth boundaries. Associated requirements will ensure high quality pedestrian, bicycle, and transit infrastructure is available within these areas to provide convenient transportation options, and cities and counties will prioritize them for location of government offices and parks, open space, and similar amenities.

Implementation Timeline

The rules provide a two-phased process for local governments to first study potential CFAs, and then, in a second phase, to adopt development standards for the area, or areas, that are most promising.

Key CFA Study Dates:

- June 30, 2023 – CFA Study Funding Expires
- December 31, 2023 – CFA Studies Due
- December 31, 2024 – Adopt CFA land use standards and any map changes*

** Local governments may request an alternative date for the adoption of land use standards, as provided in OAR 660-012-0012(4)(c).*

Goals

The purpose of this study is to identify candidate CFA areas that meet the size and locational criteria required by OAR 660-012-0310(1). Relevant zoning codes will be reviewed, and suggestions will be made regarding any changes that are necessary to bring zoning codes into compliance with CFEC rules. It is the intention of the project management team that the candidate CFA selection prioritize community context reflecting the most feasible zoning code changes, little to no infrastructure investment, and alignment with citizen interests. The City of Central Point may move forward with the identified CFA area(s) into Phase 2, or they can use what they learned from the study to choose a new area or areas for adoption.

Methodology

The methodology that was adapted to perform the CFA study was developed by the Department of Land Conservation and Development (DLCD). The Climate-Friendly Areas Methodology Guide goes over the steps to perform the CFA study. The study goes through each of the eight steps highlighted in the methodology guide, including locating and sizing CFA areas, evaluating existing code, identifying zoning changes, calculating CFA Capacity and equity analysis. While the technical analysis team was responsible for overseeing the steps reliant on GIS or analysis of the land use code, Step 1: Public Engagement Plan, was drafted and prepared by 3J Consulting.

The diagram above shows a workflow for conducting a CFA study. This is not the only order in which the Steps can be performed, but it is a recommended sequence for the purpose of clarity and efficiency.

In order to understand the context of the steps listed above, a summary of the rules, a CFA's purpose, and what requirements should exist or be adopted in CFA areas is necessary. According to DLCD, "a CFA is an area where residents, workers, and visitors can meet most of their daily needs without having to drive. They are urban mixed-use areas that contain, or are planned to contain, a greater mix and supply of housing, jobs, businesses, and services."

The following is a summary of the steps, rules, and regulations on the specifications of siting a CFA. The CFA designation process first requires a study of potential candidate areas, ultimately ending in an area(s) being designated as the City's Climate Friendly Area. This process, slated to conclude by December 2023, is known as phase 1. Phase 2: Adoption, requires that cities implement the necessary changes to the land use code to make the zones within the proposed CFA compliant with state regulations, as provided in OAR 660-012-0310 through -0320.

Community Engagement Plan

Please note that this step is planned, drafted, and prepared by 3J Consulting, in coordination with city staff and the technical analysis team. While the Community Engagement deliverables are distinctly separate from the technical CFA Study, this study does take into account the community feedback from public meetings throughout the study phases.

With that in mind, Local governments must develop a community engagement plan for the designation of CFAs that includes a process to study potential CFA areas and to later adopt associated amendments to the comprehensive plan and zoning code following the provisions of OAR 660-012-0120 through -0130:

- Engagement and decision-making must be consistent with statewide planning goals and local plans
- Cities and counties must center the voices of underserved populations in all processes at all levels of decision-making, consider the effect on underserved populations, work to reduce historic and current inequities, and engage in additional outreach activities with underserved populations
- Cities and counties must identify federally recognized sovereign tribes whose ancestral lands include the planning area and engage with affected tribes

The community engagement plan must be consistent with the requirements for engagement-focused equity analysis in OAR 660-012-0135(3). Equity analysis is required for a variety of transportation planning actions under Division 12, including study and designation of CFAs. The purpose of an equity analysis is to identify potentially inequitable consequences or burdens of proposed projects and policies on impacted communities in order to improve outcomes for underserved populations.

The equity analysis must include robust public engagement, including a good-faith effort to:

- Engage with members of underserved populations to develop key outcomes, including reporting back information learned from the analysis and unresolved issues
- Gather qualitative and quantitative information from the community—including lived experience—on potential benefits and burdens on underserved populations
- Recognize where and how intersectional discrimination compounds disadvantages
- Analyze proposed changes for impacts on and alignment with desired key community outcomes and performance measures under OAR 660-012-0905
- Adopt strategies to create greater equity and minimize negative consequences
- Report back and share the information learned from the analysis and unresolved issues with people engaged

Locate and Size Candidate CFAs

Every potential CFA area must follow the Climate Friendly and Equitable Communities (CFEC) rulemaking OAR 660-012-0310 requirements in order to be properly located and sized. The rules regarding location for potential CFAs are universal for all cities, but cities with populations over 10,000 must size their CFA so that it is able to accommodate 30% of current and projected housing needs.

The rules of OAR 660-012-0310, CFEC, that must be followed in the location process of CFA areas are listed below:

- CFA locations must be able to support development consistent with the land use requirements of OAR 660-012-0320.
- CFAs must be located in existing or planned urban centers (including downtowns, neighborhood centers, transit-served corridors, or similar districts).
- CFAs must be served by (or planned to be served by) high quality pedestrian, bicycle, and transit services.
- CFAs may not be located in areas where development is prohibited.
- CFAs may be located outside city limits but within a UGB following OAR 660-012-0310 (e).
- CFAs must have a minimum width of 750 feet, including internal rights of way that may be unzoned.

While the allowed land uses and denser environment will largely influence to appearance of a CFA, development feasibility is another important criterion to consider. The area chosen to be CFA should not have infrastructure problems or limitations that could prevent the development indicative of Climate Friendly Areas from occurring. The infrastructure capacity of a candidate CFA will be discussed with city staff to determine if it is a sufficient choice or to move forward with another candidate area.

City population is the primary determinant regarding CFA requirements. There are two categories for sizing a CFA: cities over 5,000 and cities over 10,000 in population. Central Point's population falls under the second option for cities with populations greater than 10,000. Cities with a population greater than 10,000 must designate a minimum of one CFA that accommodates 30% of their current and projected housing, the overall area being at least 25 acres in size. In addition, all CFAs must have a minimum width of 750 feet.

In discussing CFA requirements with city staff, the technical analysis team opted to utilize the prescriptive standards as by DLCD. The following table 1 shows the prescriptive standards requirements that must be incorporated in the development code, in accordance with the City's population.

Table 1. Prescriptive Standards

Population	Minimum Residential Density	Max Building Height
5,001-24,999	**15 dwelling units/net acre**	**No less than 50 ft**
25,000-49,999	**20 dwelling units/net acre**	**No less than 60 ft**
50,000 or more	**25 dwelling units/net acre**	**No less than 85 ft**

Because the city of Central Point falls under the 5,001 – 24,999 category, phase 2 will require adoption of rules of 15 dwelling units/net acre minimum residential density and a maximum building height of no less than 50 ft in height.

Evaluate Existing Code

The land use requirements established in OAR 660-012-0320, as shown below, were pivotal in determining how much a base zone naturally aligned with CFA requirements. Zones that fail to meet all the standards of Cities and counties must incorporate all requirements into policies and development regulations that apply in all CFAs.

Land Use Requirement for CFAs:

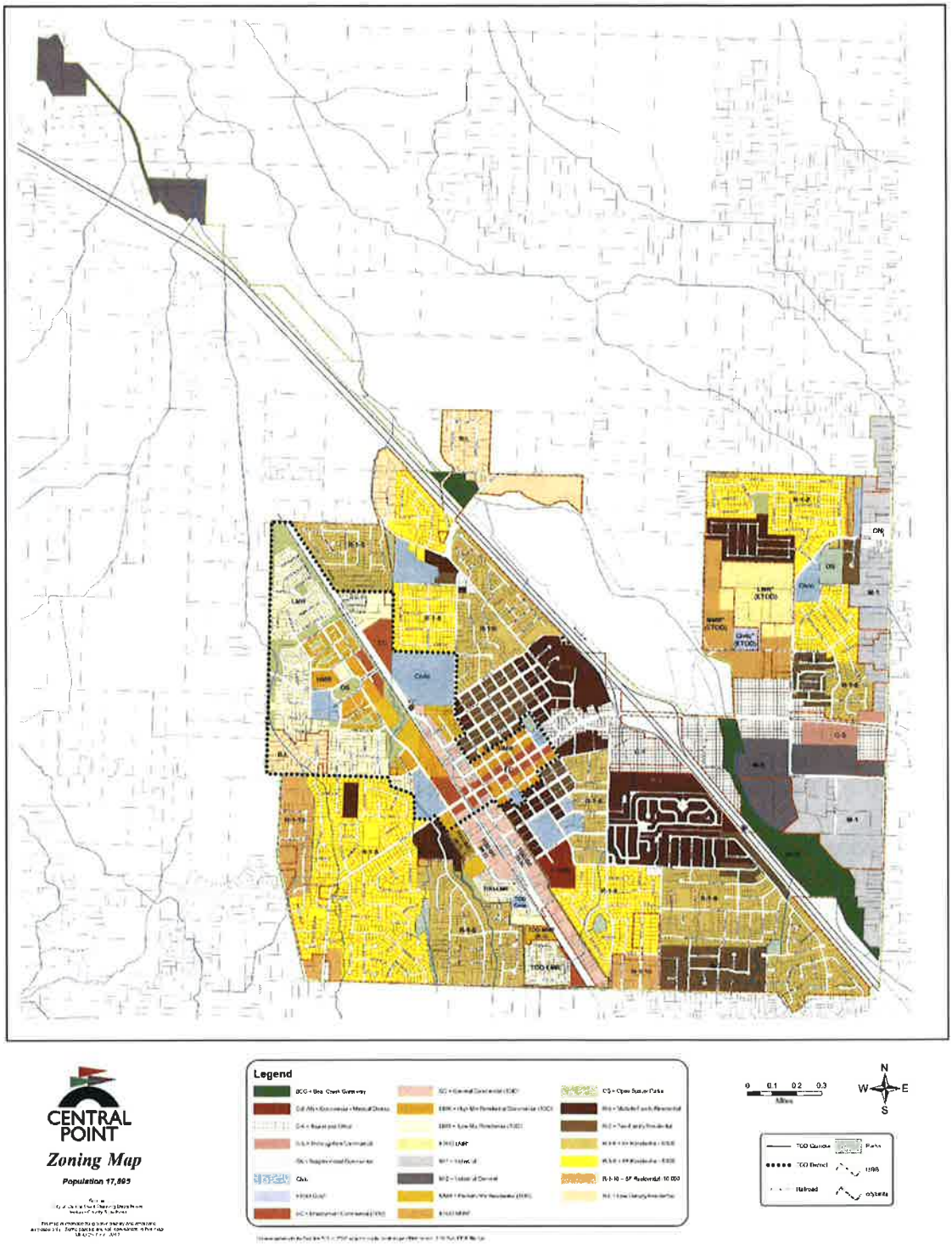
- Development regulations for a CFA shall allow single-use and mixed-use development within individual buildings or on development sites, including the following ***outright permitted uses***:
  - Multifamily Residential
  - Attached Single-Family Residential
  - Other Building Types that comply with minimum density requirements.
  - Office-type uses
  - Non-auto dependent retail, services, and other commercial uses
  - Child Care, schools, and other public uses
  - Maximum block length standards must apply depending on acreage of site
  - Maximum density limitation must be prohibited
  - Local governments must choose either to adopt density minimums and height maximums (Option A-Prescriptive Standards) or alternative performance standards (Option B-Outcome-Oriented Standards)

- Local governments shall prioritize locating government facilities that provide direct service to the public within climate-friendly areas and shall prioritize locating parks, open space, plazas, and similar public amenities in or near climate-friendly areas that do not contain sufficient parks, open space, plazas, or similar public amenities.
- Streetscape requirements in CFAs shall also include street trees and other landscaping, where feasible.
- Local governments shall establish maximum block length standards as follows:
  - Development sites < 5.5 acres: maximum block length = 500 feet or less
  - Development sites > 5.5 acres: maximum block length = 350 feet or less

- Development regulations may not include a maximum residential density limitation
- Local governments shall adopt policies and development regulations in CFAs that implement the following:
  - Transportation review process in OAR 660-012-0325
  - Land use requirements in OAR 660-012-0330
  - Parking requirements in OAR 660-012-0435
  - Bicycle parking requirements in OAR 660-012-0630
- Local governments may choose to EITHER adopt density minimums and height maximums (Option A—Prescriptive Standards) OR adopt alternative development regulations to meet performance standards (Option B—Outcome-Oriented Standards)

The following map 1 is the city's zoning map, and helps convey where zones are located throughout the city of Central Point.

Map 1. City of Central Point Zoning Map



Identify Zoning Changes:

Zoning in CFAs may need to change if the existing zoning does not meet the land use requirements in OAR 660-012-0320. During phase 1 of the study, cities do not need to adopt the land use requirements, but evaluation of necessary land use reforms may influence a base zone's viability of being a potential CFA candidate. Essentially, an existing zone that meets a large proportion of the CFA criteria will likely feature the characteristics that define climate friendly areas, while zones that require intense reform may not incentivize development due to lack of compatible land uses or alternative transit infrastructure.

During the adoption phase, slated to occur in 2024, local governments will have to make and adopt all necessary zoning changes and will need to provide DLCD with documentation that all adopted and applicable land use requirements for CFAs are consistent with OAR 660-012-0320.

Calculate CFA Capacity

In addition to evaluating the existing or anticipated zoning code in the CFA(s) to determine if they are compatible with the requirements of OAR 660-012-0320, the proposed CFA(s) must meet the residential housing capacity threshold expressed in OAR 660-012-0315(1). The target threshold to meet is at least 30% of current and projected housing needs citywide. The total number of housing units necessary to meet all current and projected housing needs is derived from the most recent adopted and acknowledged housing capacity analysis (HCA; also known as a housing needs analysis or HNA) as follows:

Total no. housing units needed = existing dwelling units within the city + anticipated no. projected future units

After calculating the Total Housing Units Needed, the technical analysis team proceeded to calculate the potential housing unit capacity of the proposed CFA site. The following page goes over the equation that will be used to calculate the Housing Unit Capacity.

Calculating Housing Unit Capacity:

The following method was adapted from DLCD's Climate-Friendly Areas methodology guide. The calculation follows the prescriptive path requirements as described in the methodology guide. Total Housing unit Capacity in CFA is estimated using the following variables or factors:

1. The Net Developable Area in SQ. FT. (a)
2. The maximum number of building floors (f)
3. The assumed percentage of residential use (r)
4. The average size of a housing unit in SQ. FT. (s)

Using these, the housing unit capacity (U) in any part of a CFA can be given by a simple formula:

$$\text{Housing Unit Capacity } (U) = \frac{(\text{ Net Developable Area } * \text{ Maximum floors } * \text{ Resident use percentage })}{Average\ Housing\ Unit}$$

Note: In the above formula, the results are rounded up to the nearest integer.

Net Developable Area and Maximum Building Floor factors in the above calculation requires some additional sub-calculations. The values to use for Assumed Percentage of Residential Use (r) and Average Size of a Housing Unit (s) are given in the rules.

Each uniquely zoned area of the CFA will have its own calculations of these factors and the above housing unit formula. Then they are summed for the CFA area to give the total Housing Unit Capacity.

Equity Analysis

Local governments must determine if rezoning the potential CFA would be likely to displace residents who are members of state and federal protected classes and identify actions to mitigate or avoid potential displacement.

The CFA Study must include plans for achieving fair and equitable housing outcomes within CFAs following the provisions in OAR 660-008-0050(4)(a)-(f). CFA studies must include a description of how cities will address each of the following factors:

- Location of Housing: How the city is striving to meet statewide greenhouse gas emission reduction goals by creating compact, mixed-use neighborhoods available to members of state and federal protected classes.
- Fair Housing: How the city is affirmatively furthering fair housing for all state and federal protected classes.
- Housing Choice: How the city is facilitating access to housing choice for communities of color, low-income communities, people with disabilities, and other state and federal protected classes.
- Housing Options for residents Experiencing Homelessness: How the city is advocating for and enabling the provision of housing options for residents experiencing homelessness and how the city is partnering with other organizations to promote services that are needed to create permanent supportive housing and other housing options for residents experiencing homelessness.
- Affordable Homeownership and affordable Rental Housing: How the city is supporting and creating opportunities to encourage the production of affordable rental housing and the opportunity for wealth creation via homeownership, primarily for state and federal protected classes that have been disproportionately impacted by past housing policies.
- Gentrification, Displacement, AND Housing Stability: How the city is increasing housing stability for residents and mitigating the impacts of gentrification, as well as the economic and physical displacement of existing residents resulting from investment or redevelopment.

Please note, the equity analysis was performed with the guidance of DLCD's Anti-Displacement and Gentrification Toolkit. The Toolkit provides an in-depth resource for local government to address racial and ethnic equity in housing production, including a list of strategies to mitigate the impacts of gentrification and displacement. The toolkit helps and guide local governments to establishing a framework for creating housing production strategies with a particular focus on the unintended consequences of those strategies.

Chapter 2: Candidate Climate Friendly Area Analysis

This section reviews the analysis components that were performed in the study to derive the results of the study. Beginning with initial candidate location suggestions from City Staff, then, calculating the housing capacity of the proposed CFAs boundary, with readjusting the CFAs size as needed to accommodate the housing unit capacity.

On the other hand, the zoning analysis focuses on the land use requirements in OAR 660-012-0320 and compares them with the city codes to find suitable zones that are fully or partially compliant with the CFA land use requirements. The zoning analysis help informs the team of the land use compatibility of the proposed CFA areas. Zoning analysis and identifying zoning changes go hand in hand. Identify Zoning Changes comes in if existing development standards do not meet CFA requirements, identify necessary zoning changes on the specific zones and how to bring them into compliance with the land use requirements or OAR 660-012-0320.

While the zoning analysis determines if the land use is in line with the CFA requirements, the GIS analysis helps determine the status of transportation infrastructure that is within or around the proposed CFA area and whether the proposed area satisfies the transportation connectivity aspect of the regulations, as a CFA site must be served by, or planned to be served by, high quality pedestrian, bicycle, and transit services according to OAR 660-012-0310.

Capacity analysis determines whether the potential CFA, or a combination of CFAs, can accommodate 30% of citywide current and projected housing need. If identified CFA candidate area(s) are not sufficient to accommodate at least 30% of housing need, resizing the proposed CFA area or identifying additional candidate CFA areas must be performed to satisfy the 30% of housing need.

Equity analysis, found within chapter 2 of the study, must determine if rezoning the potential CFA would be likely to displace residents who are members of state and federal protected classes and identify actions to mitigate or avoid potential displacement. Chapter 2 of this study includes plans for achieving fair and equitable housing outcomes within CFAs following the provisions in OAR 660-008-0050.

Overall, the analysis steps are intertwined with each other. Locating a CFA candidate, calculating Housing Needs, Zoning analysis, GIS analysis, Capacity analysis are all the steps that are followed to designate the appropriate CFA within the city.

Locate and Size Candidate CFAs

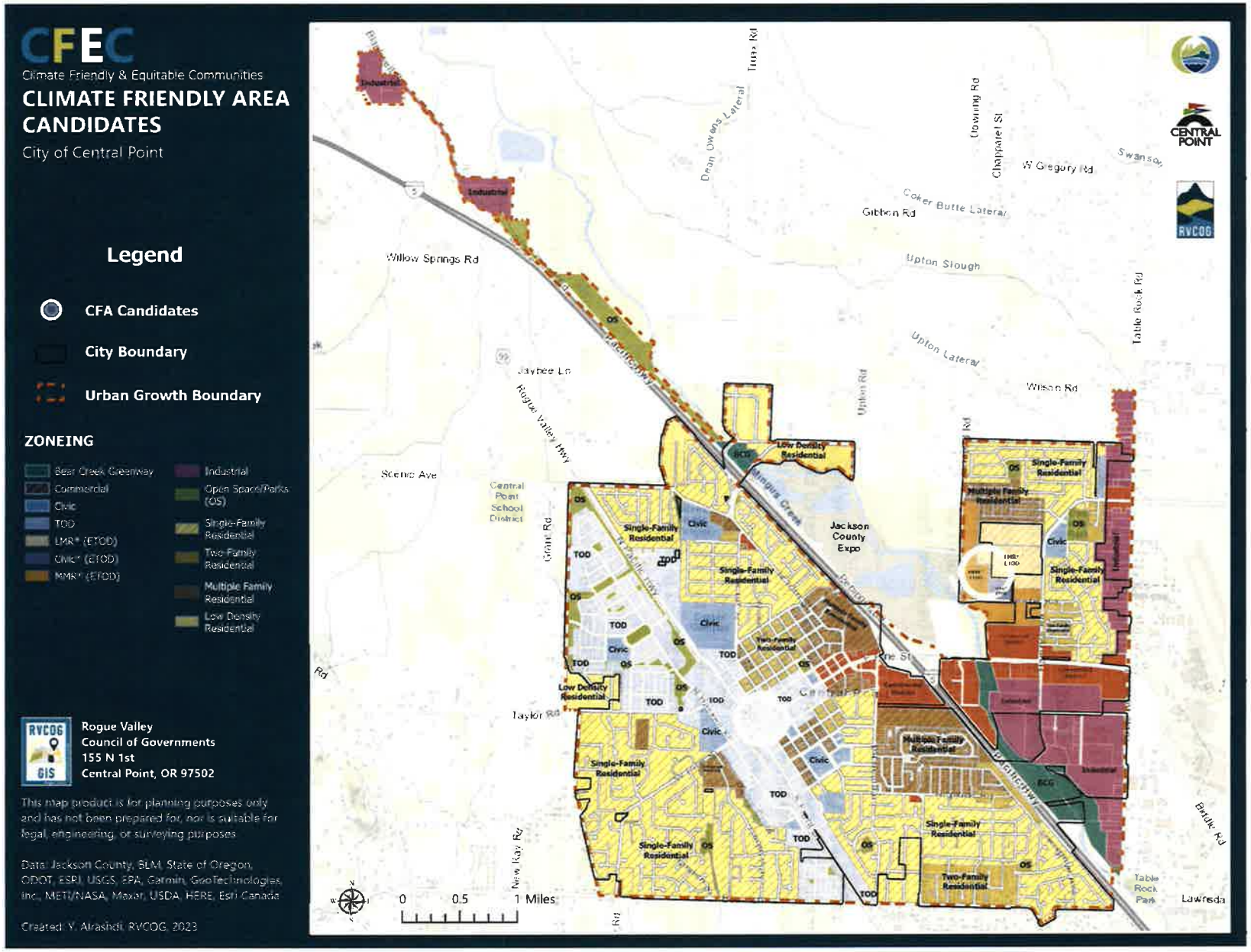
City Guidance

In Project Management Team Meeting 1, Central Point city staff expressed some possible locations for CFA. The East Transit Oriented District, ETOD, is the primary suggestion from the city staff. The area has a lot of undeveloped land and supports high density mixed-use development. The downtown could be considered as a possible CFA. Generally, several analyses will be performed to identify and locate candidates for CFA. City's guidance or comments will be taken under consideration with the results of the analysis. The analysis criteria will be derived from the CFEC requirements.

The ETOD makes a perfect candidate for CFA, but the city will need to address several concerns about the area. First, the nearest bus stop for the suggested CFA candidate is around 1 mile away, and pedestrian travel times range from 15 to 30 minutes as the pace largely depends on the individual's age and ability. Furthermore, the limited sidewalk infrastructure serves as a barrier for accessibility to the bus stop, however the area does have good bicycle infrastructure. All in all, the connectivity of the ETOD needs to be addressed and planned for it to be a CFA candidate. Should such planning occur, the CFEC rules would allow the city of Central Point to capitalize on a largely undeveloped portion of their city.

Overall, guidance from city staff culminated in the two locations shown in map 2. Further analysis might reveal other unanticipated potential CFA candidates, but hopefully should affirm the initial selection from City Staff.

Map 2: CFA Candidates



Calculate Housing Units Needed

As outlined in the methodology guide, the proposed CFA(s) must meet the residential housing capacity threshold expressed in OAR 660-012-0315(1). The threshold to meet is that the cumulative capacity of the CFA(s) is at least 30% of current and projected housing needs citywide. And this is derived by the following formula:

> ***Total no. housing units needed = existing dwelling units within the city + anticipated no. projected future units***

City of Central Point has an adopted and acknowledged Housing Needs Analysis for 2019 - 2039. According to the analysis, there are ***6,864*** existing housing units in the City of Central Point. Long-range population forecasts prepared by PSU anticipate approximate of 7,000 new residents will be added to the Central Point over the next 20 years. Therefore, the City of Central Point anticipates the need for an additional ***2,887*** units.

> Existing units + anticipated no. future needed units = total no. units needed
>
> ***6,864*** (existing units) + ***2,887*** (anticipated no. future needed units) = ***9,751*** total units needed
>
> CFA must be sized to accommodate 30% of total current & future units needed
>
> 30% of ***9,751*** total units needed = ***2,925.3*** units

The City of Central Point must capture zoned residential building capacity sufficient to contain ***2,926 (rounding up from 2,925.3)*** units in one or more CFA(s).

Zoning Analysis:

Code review:

Existing zoning codes were compared to the CFA requirements to identify those zones that are most closely aligned with CFEC rules. Shown in Table 2, zones were scored for each criterion with 2 points for being in compliance, 1 point for conditional or mixed compliance, and 2 for allowed building height of 50 feet or more. Green cells are those in compliance. Yellow cells are those that have partial or conditional compliance or are closest to the 50-foot building height maximum and overall are closer to compliance than other options. Any zone can be adjusted to be made CFEC-compliant, so CFAs are possible anywhere in the city, but those zones that are not prioritized are those that would take more legislative changes and create more dramatic changes to the built environment relative to what is currently in the area.

Overall, the scoring matrix indicates the overall suitability of the zones in regard to the land use requirements. However, the scores are only the first step of the analysis, and the results they produce are only one factor among the other criteria the study analyzes. Therefore, a high scoring zone alone does not determine a CFA candidate area, and so the location of the zones and surrounding transportation infrastructure must be factored in the 2nd step of analysis.

Table 2. City Code Review

Legend Y - Yes, Permitted Outright C - Conditional M - Mixed N - Not Permitted N/A - Not Applicable	Scoring Matrix: Y = 2 C/M = 1 N/A = 1 Building height >= 50 = 1 Building height < 50 = 0 N = 0	Residential				TOD DISTRICTS AND CORRIDORS							Commercial			Industrial		
		Residential low-Density	Residential Single-Family	Residential two-Family	Residential multiple-Family	Low mix residential	Medium mix residential	Hight mix residential	Employment Commercial	General Commercial	Civic	Parks & Open Space	Neighborhood Commercial District	Tourist and office-professional	Thoroughfare commercial	Industrial	Industrial general	Bear Creek Greenway
		R-L	R-1	R-2	R-3	LMR	MMR	HMR	EC	GC	C	OS	CN	C-4	C-5	M-1	M-2	B.C.G.
Single Use		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mixed Use		N	N	N	N	M	Y	Y	Y	Y	N	N	N	N	N	N	N	N
MF, SF Attached, Office, Non-Auto Retail/Services/Commercial, Childcare, Schools, Other Public Uses		N	N	M	M	Y	Y	Y	Y	Y	N	N	M	M	M	M	M	N
Gov. Facilities, Parks, Open Space, Other Similar		C	C	Y	Y	M	M	M	M	M	Y	Y	N	N	N	N	N	N
Maximum Block Length		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Density Minimum (15 Dwelling Units/Acre)		N	N	N	N	N	Y	Y	N/A	N/A	N	N	N	N	N	N	N	N
Density Maximums Prohibited		N	N	N	N	N	N	Y	Y	Y	Y	Y	N	N	N	N	N	N
Maximum Building Height (>= 50ft)		N	N	N	N	N	N	Y	Y	Y	N	N	N	Y	N	Y	Y	N
Maximum Building Height (ft)		35	35	35	35	35	45	60	60	60	45	35	35	60	35	60	60	15
	Zone Score	3	3	5	7	6	9	13	12	12	6	6	3	5	3	5	5	2

Identify Zoning Changes

Zones were evaluated in more depth to determine the specific changes that are needed to bring them into compliance with CFEC rules. The purpose of the initial zoning code evaluation was to identify those zones that are the most CFA-ready as a way to ensure that CFA-related changes occur where they are most compatible within the existing built environment and simplify the City's process of updating zoning codes.

Residential Zones:

The residential zones are not fully compatible with the land use requirements. Most of the residential zones are designed to host low-density development in them with no mixed-use and or commercial, except for R-2 and R-3 which allow some commercial activities. In general, the residential zones are not the most compatible with the CFA land use requirements.

- *Residential low-Density (R-L):*
  - This zone designed to provide for a semi-rural residential environment, and it is located at the edge of the city boundary. To meet CFA requirements this zone, would need to allow a wider array of uses like commercial use or office uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements. Also, government facilities, parks, and open space need to be an outright permitted use in the zone, according to OAR 660-012-0320.

- *Residential Single-Family (R-1):*
  - This zone is designed to stabilize and protect the urban low density residential characteristics of the district while promoting and encouraging suitable environments for family life. To meet CFA requirements this zone, would need to allow a wider array of uses like commercial use or office uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements. Also, government facilities, parks, and open space need to be an outright permitted use in the zone, according to OAR 660-012-0320.

- *Residential Two-Family (R-2):*
  - The Two-Family zone is designed to promote and encourage a suitable environment for family life at a slightly higher density than that permitted in the R-1 district. It allows for duplex or multi-unit uses, but not a wide array of commercial uses is allowed. To meet CFA requirements this zone, would need to allow a wider array of commercial use, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements.

- *Residential Multiple-Family (R-3):*
  - This district encourages high-density development of single-family and multiple-family housing types. The district is located to close from shopping and employment opportunities, public facilities, and major streets and highways. To meet CFA requirements this zone, would need to allow a wider array of commercial use, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements.

Commercial Zones:

The commercial zones in the city are not fully compatible with the CFA land use requirements. The city would need to allow wider array of uses and mandate density minimums and building high minimums with other changes.

- *Neighborhood Commercial District (C-N):*
  - This district is intended to provide locations for neighborhood shopping centers located within the neighborhoods. To amend this zone, the city would need to allow a wider array of uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements. Also, government facilities, parks, and open space need to be an outright permitted use in the zone, according to OAR 660-012-0320.

- *Commercial-Medical District (C-2):*
  - This district was designed to accommodate medical care within the city boundaries. The zone supports residential development standards of the TOD-LMR. However, the city would need to allow a wider array of uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements. Also, government facilities, parks, and open space need to be an outright permitted use in the zone, according to OAR 660-012-0320.

- *Tourist and Office-Professional District (C-4):*
  - The district is intended to provide for the development of concentrated tourist commercial and entertainment facilities. Amending this zone would need a wide range of uses to be outright permitted, the city would need to outright permit government facilities, parks, and open space uses in the zone and adopt CEFC block length requirements. Also, mandate a minimum density of 15 units/acre.

- *Thoroughfare Commercial District (C-5):*
  - The C-5 district is intended to provide for commercial and business uses that are most appropriately located along or near major highways or thoroughfare. Amending this zone would need a wide range of uses to be outright permitted, mandate a minimum density of 15 units/acre and introduce a new building height at least 50 feet or higher. Outright permit government facilities, parks, and open space uses in the zone.

TOD District and Corridors:

The purpose of the Central Point transit-oriented development (TOD) district is to promote efficient and sustainable land development and the increased use of transit. In general, the TOD district scores the highest and it is more compatible with the land use requirements for CFAs; specifically, the high density zones like MMR, HMR, EC and GC.

- *Low Mix Residential (LMR):*
  - This is the lowest density residential zone in the district. Single-family detached residences are intended to be the primary housing type; however, attached single-family and lower density multifamily housing types are also allowed. To meet CFA requirements this zone, would need to outright permit mixed uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements. Also, government facilities, parks, and open space need to be an outright permitted use in the zone, according to OAR 660-012-0320.

- *Medium Mix Residential (MMR):*
  - This medium density residential zone focuses on higher density forms of residential living. The range of housing types includes higher density single-family and a variety of multifamily residences. Low impact commercial activities may also be allowed. To meet CFA requirements this zone, would need to outright permit government facilities, parks, and open space uses in the zone. Mandate a minimum density of 15 units/acre and introduce a new building height minimum of 50 feet, 5 feet more than what is currently allowed. Adopt CEFC block length requirements, prohibit maximum density requirements.

- *High Mix Residential/Commercial (HMR):*
  - This is the highest density residential zone intended to be near the center of the TOD district. High density forms of multifamily housing are encouraged along with complementary ground floor commercial uses. Low impact commercial activities may also be allowed. Low density residential uses are not permitted. The HMR zone already aligns well with CFEC land use regulations. However, the city would need to outright permit government facilities, parks, and open space uses in the zone and adopt CEFC block length requirements.

- *Employment Commercial (EC):*
  - This district was designed to host retail, service, and office uses are primarily intended for this district. Activities which are oriented and complementary to pedestrian travel and transit are encouraged. Residential uses above ground floor commercial uses are also consistent with the purpose of this zone. To amend this zone, the city would need to outright permit government facilities, parks, and open space uses in the zone and adopt CEFC block length requirements. Also, mandate a minimum density of 15 units/acre.

- *General Commercial (GC):*
  - In this district commercial and industrial uses are primarily intended for this district. Also, in this district residential uses above ground floor commercial uses are also consistent with the purpose of this zone. To amend this zone, the city would need to outright permit government facilities, parks, and open space uses in the zone and adopt CEFC block length requirements. Also, mandate a minimum density of 15 units/acre.

- *Civic (C):*
  - Civic uses such as government offices, schools, and community centers are the primary uses intended in this district. These uses can play an important role in the vitality of the TOD district. To amend this zone, the city would need to allow a wider array of uses like allow residential and commercial uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 5 feet more than what is currently allowed. Adopt CEFC block length requirements.

- *Open Space (OS):*
  - This zone is intended to provide a variety of outdoor and recreation amenities. Because the density of development will generally be higher than other areas in the region, this zone will providing open space and recreation opportunities for the residents and employees in the TOD district. To amend this zone, the city would need to allow a wider array of uses like allow residential and commercial uses, mandate a minimum density of 15 units/acre, and introduce a new building height minimum of 50 feet, 15 feet more than what is currently allowed. Adopt CEFC block length requirements.

- *Bear Creek Greenway (B.C.G.):*
  - The B.C.G. district is intended to provide for environmental preservation and limited development within the portion of the Bear Creek Greenway. This district is intended to protect the public health and safety, preserve the natural environment of the Bear Creek corridor. This zone was not designed to support any heavy development and the main goal of it to preserve the environmental and ecological system of the Bear Creek.

Industrial Zones:

The industrial zones are more consistent with the density and height requirements of the CFA land use requirements. However, they fall short of the residential and mixed-use requirements.

- *Industrial District (M-1):*
  - The purpose of this district is to provide areas suitable for the location of light industrial uses involved in service, manufacturing, or assembly activities. But the zone falls short on outright permitted uses, according to the CFA land use requirement. To make this zone suitable the city would need to outright permit wide range of uses and adopt CEFC block length requirements. Also, mandate a minimum density of 15 units/acre and introduce a new building height at least 50 feet or higher.

- *Industrial General District (M-2):*
  - M-2 district is to provide areas suitable for all types of industrial uses. However, the district falls short on outright permitted uses, according to the CFA land use requirement. To make this zone suitable the city would need to outright permit wide range of uses and adopt CEFC block length requirements. Also, mandate a minimum density of 15 units/acre and introduce a new building height at least 50 feet or higher.

CFA Compatible Zones:

CFA Friendly zones are consistent, either fully or partially, with the land use requirements of OAR 660-012-0320. Selecting the most compatible zones with the land use requirements and identifying them as suitable zones will help determine where the most suitable CFA candidates are for the city. These are extracted or derived from the prior step, code review. The following is a list of the most consistent zones with the land use requirements in the city:

Medium Mix Residential (MMR):

As mentioned earlier, the MMR zone is one of the most suitable zones in the city to host a CFA. The zone's attributes density and permitted uses requirements are largely in compliance with the land use requirements. To make this zone compliant with CFA requirements, density maximums will need to be removed, maximum building height would need to be increased by 15 feet, and block lengths standards would need to be adjusted to facilitate walkability. Significantly amending this zone may be a challenge however, as medium density zones often act as transitional areas between high and lower intensity uses and altering this zone to act like the HMR zone would nullify this zone's ability to diffuse density. The analysis team would recommend rezoning MMR parcels or limiting housing typologies permitted within to preserve this function.

TOD - Medium Mix Residential	
Single Use	Y
Mixed Use	Y
MF, SF Attached, Office, Non-Auto Retail/Services/Commercial, Childcare, Schools, Other Public Uses	Y
Gov. Facilities, Parks, Open Space, Other Similar	M
Maximum Block Length	N
Density Minimum (15 Dwelling Units/Acre)	Y
Density Maximums Prohibited	N
Maximum Building Height (>= 50ft)	N
Maximum Building Height	35

High Mix Residential (HMR):

The HMR scores the highest in the scoring matrix due to the array of the uses and density requirements the zone supports. Specifically, the zone allows for a wide range of residential and commercial uses and allows for development above the 50 feet mark. The city will need to allow for government facilities and adjust block length to make this zone fully compliant.

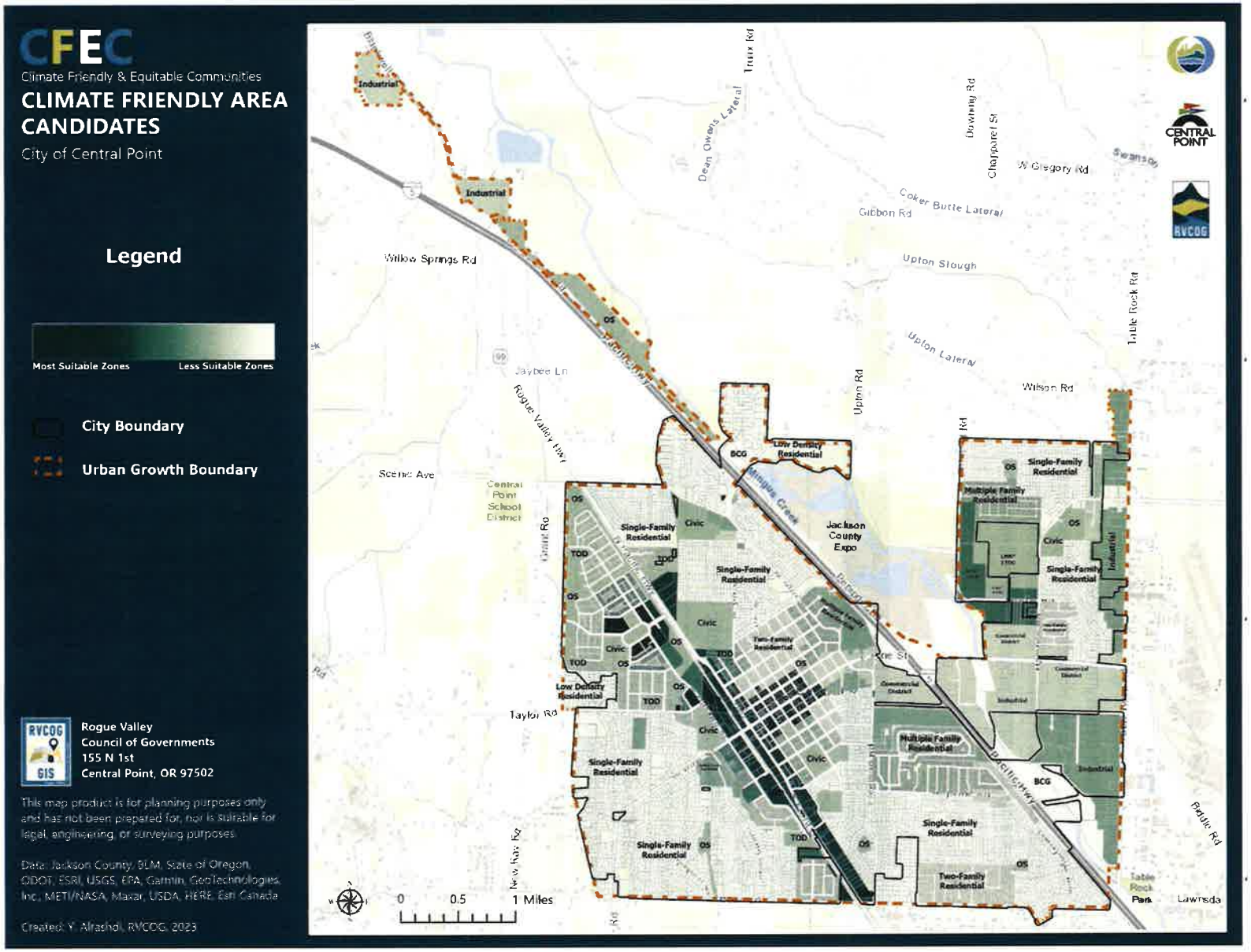
TOD - High Mix Residential	
Single Use	Y
Mixed Use	Y
MF, SF Attached, Office, Non-Auto Retail/Services/Commercial, Childcare, Schools, Other Public Uses	Y
Gov. Facilities, Parks, Open Space, Other Similar	M
Maximum Block Length	N
Density Minimum (15 Dwelling Units/Acre)	Y
Density Maximums Prohibited	Y
Maximum Building Height (>= 50ft)	Y
Maximum Building Height	60

Employment Commercial (EC) & General Commercial (GC):

Employment Commercial and General Commercial share the exact same attributes and scores the same in the scoring matrix. Both zones are compliant with the land use requirements. The not applicable density in the zones and building height above 50 feet makes the zones very hospitable to a CFA. However, the city will need to amend the zone to allow for government and public facilities, introduce a density minimum of 15 units per acre, and alter block length standards to support pedestrian movement.

TOD - Employment Commercial & General Commercial	
Single Use	Y
Mixed Use	Y
MF, SF Attached, Office, Non-Auto Retail/Services/Commercial, Childcare, Schools, Other Public Uses	Y
Gov. Facilities, Parks, Open Space, Other Similar	M
Maximum Block Length	N
Density Minimum (15 Dwelling Units/Acre)	N/A
Density Maximums Prohibited	Y
Maximum Building Height (>= 50ft)	Y
Maximum Building Height	60

Map 3. Zoning Analysis Map



CFA Capacity Calculation

Candidate CFA locations have been identified and prioritized, and this step evaluates each area's housing capacity. If the proposed CFA's boundaries do not encompass 30% or more of current and future units, the boundaries need to be adjusted or additional CFAs need to be sited. Additional CFA candidate areas that have been identified will be considered first for CFA expansion if need be and the evaluation process will begin at Step 2 for these sites.

City Guidance:

City staff have highlighted several priority CFA candidate areas. These areas were included not only for their compatibility to CFA regulations, but also for their development potential. Largely, the East Transit Oriented District (ETOD) site is one of the largest pieces of vacant land within city limits, while also being surrounded by array of uses constituting the eastern commercial core. Some consideration was given to the HWY 99 TOD to serve as secondary CFA meant to bolster employment related uses, but Staff indicated to only consider the area if the Eastern TOD is unable to meet the unit capture requirements.

East Transit Oriented District (ETOD):

The ETOD site is located on the east side of I-5 and is around 130 acres. The ETOD is mostly undeveloped and has the opportunity to host a wide array of uses within it. Furthermore, the Bear Creek greenway runs alongside the ETOD and offers the unique opportunity to connect this proposed mixed use core to a regional multimodal pathway. Furthermore the recent 2019 Urban Growth Boundary Amendment included the tract of land between Bear Creek and Peninger Road with plans from the city to connect to Beebe Road via a bridge. Moreover, the commercial zoned land within this recent UGB inclusion is planned to host a new Central Point Civic center, a valuable asset to the CFA.

ETOD area is planned to host wide range of zones, as seen in image 1. A mix of, commercial zoning, mixed use residential at both low and medium densities, encourages a wide array of amenities and housing options. In some areas the city is reevaluating and planning to rezone area to high density mixed use residential to better concentrate the CFA.

The ETOD is in a close proximity to existing transportation infrastructure in the form of RVTD's route 40, with plans to add a new Central Point Circulator Route in the near future according to RVTD Transit Master Plan, dubbed route 41 and shown in image 2. This will increase the connectivity between the ETOD and the downtown area and supports the alternative transit options integral to a CFA.

Overall, the ETOD site is viewed as an excellent CFA location due to its development potential, large size, and proximity to quality transit service and bicycle and pedestrian infrastructure.

Image 1: ETOD Site

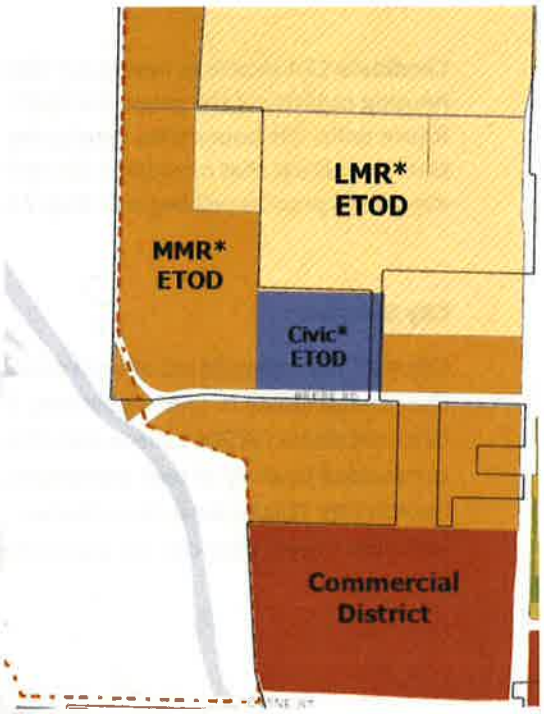


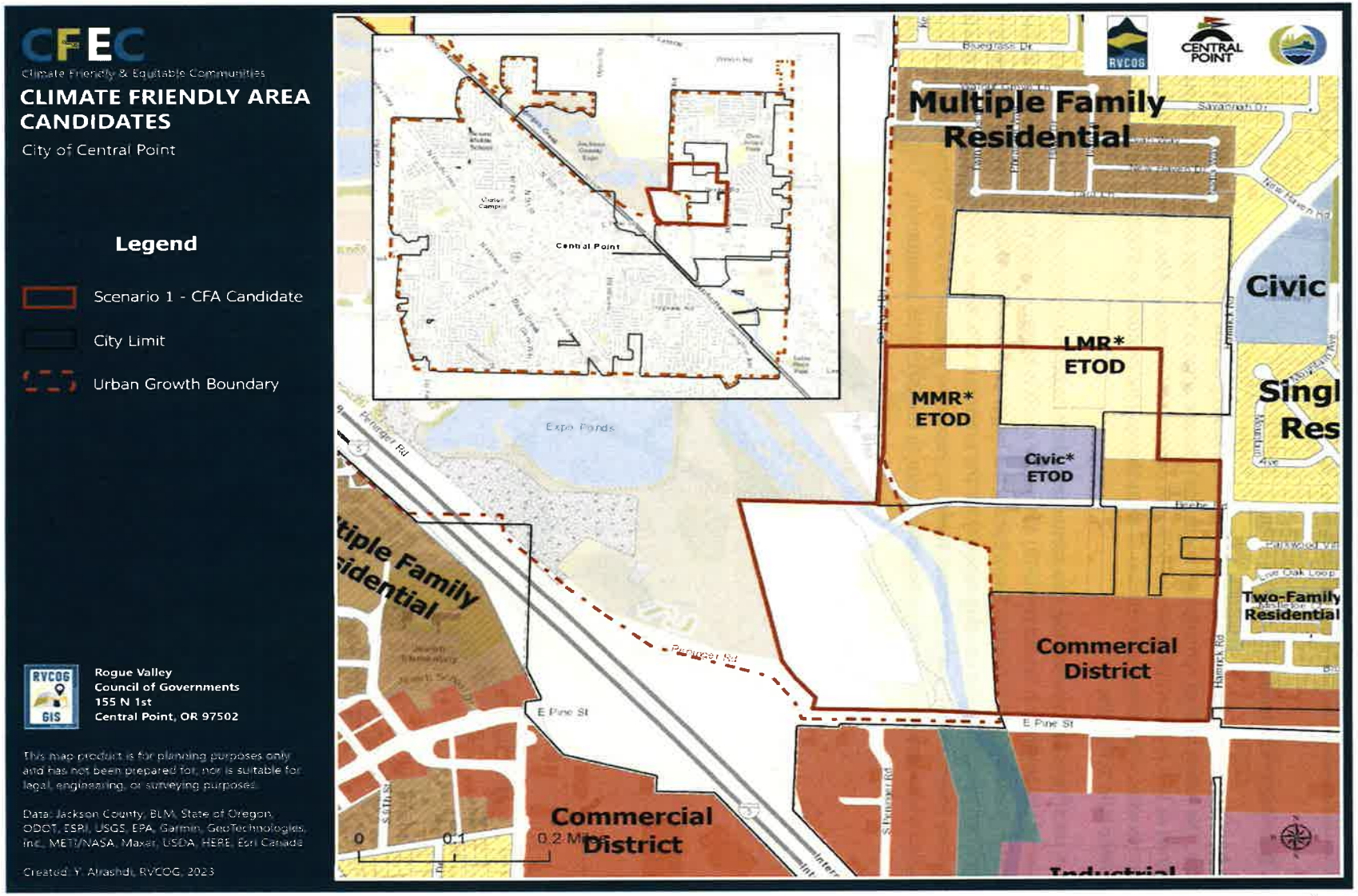
Image 2: CENTRAL POINT CIRCULATOR

CFA Boundaries Scenarios:

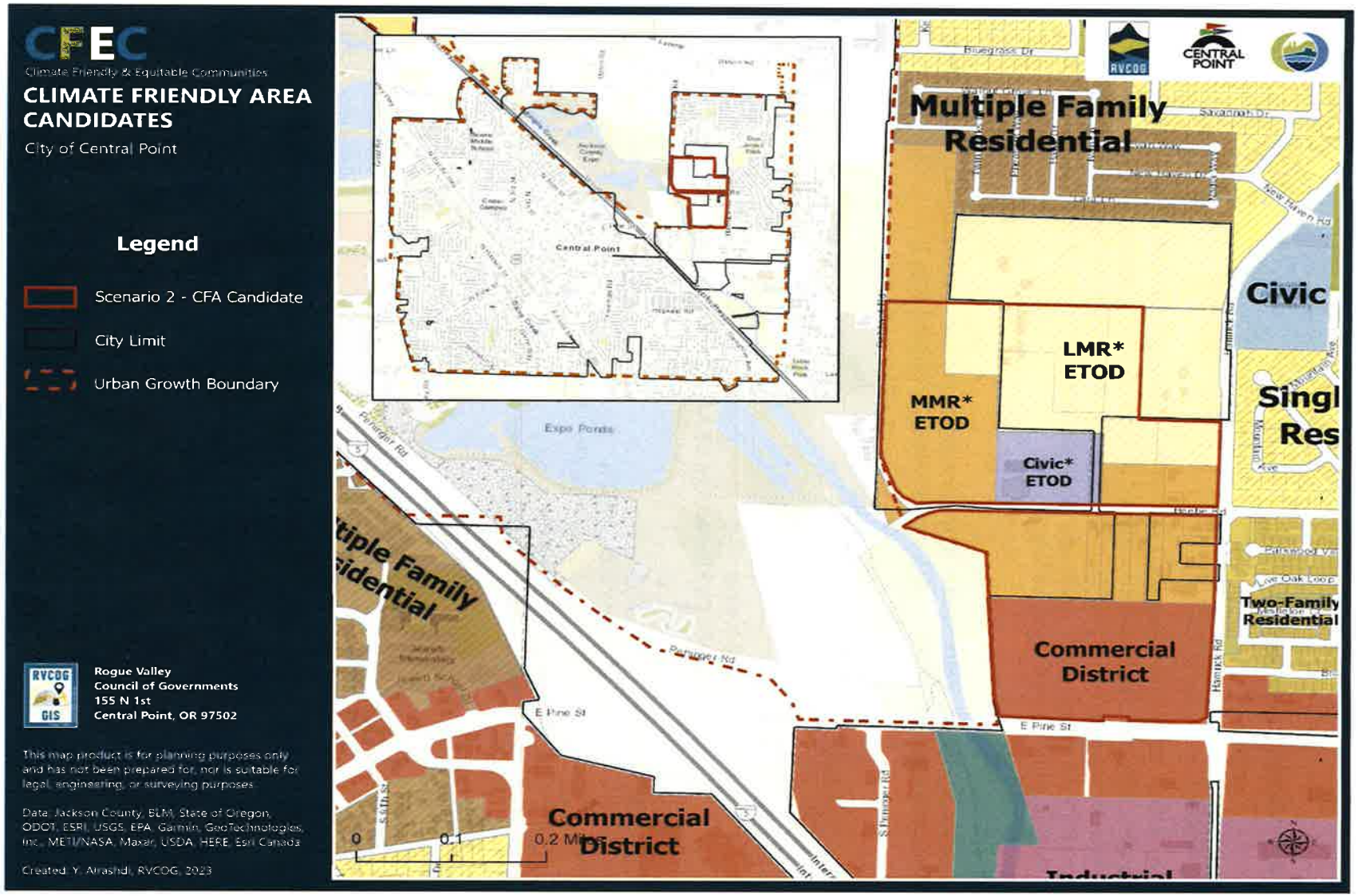
Two boundary scenarios are used to calculate the capacity for the ETOD site, as shown in Maps 4 and 5 below. The intent behind running two scenarios is to see what is the least amount of area that could be assigned as CFA and can still meet the 30% unit capture requirement. Also, these scenarios help illustrate what is the maximum number of units that can be captured in ETOD site when using all the available land in the site.

The main difference between the two scenarios is the first boundary includes a part of the newly amended Urban Growth Boundary (UGB) of the city and it is bigger in area than the second boundary scenario, measuring at 110 acres. Theoretically the larger area provides the opportunity to capture more units when calculating the housing capacity for the proposed CFA, Map 1. On the other hand, the second boundary favors a much more compact scenario, measuring at about 70 acres. This scenario only includes what was within the city's boundary prior to the 2019 UGB amendment.

Map 4: NDA Evaluation: Scenario 1



Map 5: NDA Evaluation: Scenario 2:



Capacity Calculation Requirements:

Assumptions

Because ETOD is largely undeveloped it is prudent to use city standards to determine gross and net block areas. Note that the calculations are based on the block's measurements, and do not account for all interior lot setbacks. Also, City of Central Point will be eliminating all parking requirements from the city to satisfy the parking reform found within OAR 660-012-0420. Values shown below may differ slightly from actual values due to rounding.

Please note, the City of Central Point must capture zoned residential building capacity sufficient to contain **2,925** units in one or more CFA(s), as calculated in chapter 2 page 22.

1. *City Standards*

   A. Deductions
      i. Right-of-Way: **25%**
      ii. Planned Open Space: **16.18 Acres (only in scenario 1)**

   B. Block Standards
      i. Block Perimeter: **2000 ft**
      ii. Block measurement: **600 ft * 400 ft**
      iii. Alley: **20 ft * 400 ft**
      iv. Gross Block Area: **240000 sq. ft. = 6 Acres**

   C. Maximum Floors
      i. LMR: **4 Floors**
      ii. MMR: **4 Floors**
      iii. HMR: **5 Floors**
      iv. Civic: **4 Floors**
      v. C-4, GC, EC: **5 Floors**

2. *DLCD Standards*
   A. Percent Residential Use: **30%**
   B. Average Housing Unit Size: **900 ft**

Using the Housing Unit Capacity with City standards, and DLCD standards we will calculate each zones Housing Unit Capacity and then sum them up to determine if the ETOD can capture the 30% Projected Housing Needed as a CFA or there is a need to designate a secondary CFA.

Scenario 1: East Transit Oriented (ETOD) Housing Unit Capacity:
The first scenario will use the boundary that is shown back in Map 4 and other attributes from area size to the city's and DLCD standards, see table 3 for Acreage breakdown for scenario 1. The calculations are broken down by zones and then summarized at the last table:

Table 3: Acreage breakdown: Scenario 1:

Area (Acres)						
LMR	MMR	CIVIC	C-4	GC (Planned)	Total	NDA Total*
13	36	6	22	17.539	110.719	68.540775

*Net Developable Area is the total area after all the deductions.

Total Housing Unit Capacity: Low Mix Residential (LMR):

Table 4 summarizes the Total Housing Unit Capacity calculation within the Low Mix Residential use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 4: ETOD – LMR:		
Total Area		13 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	9.4 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	547 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	18%
Unit per Acre	*(Total units/Total Area)*	58

Total Housing Unit Capacity: Medium Mix Residential (MMR):

Table 4-1 summarizes the Total Housing Unit Capacity calculation within the Medium Mix Residential use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 4-1: ETOD – MMR:		
Total Area		36 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	26.1 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	1515 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	51%
Unit per Acre	*(Total units/Total Area)*	58

Total Housing Unit Capacity: Civic (C):

Table 4-2 summarizes the Total Housing Unit Capacity calculation within the Civic use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 4-2: ETOD – Civic:		
Total Area		6 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	4.35 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	252 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	20%
Unit per Acre	*(Total units/Total Area)*	57

Total Housing Unit Capacity: Tourist and Office-Professional District (C-4):

Table 4-3 summarizes the Total Housing Unit Capacity calculation within the Tourist and Office-Professional District (C-4) use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 4-3: ETOD – (C-4):		
Total Area		22 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	15.95 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	1157 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	38%
Unit per Acre	*(Total units/Total Area)*	72

Total Housing Unit Capacity: General Commercial (GC):

Table 4-4 summarizes the Total Housing Unit Capacity calculation within the General Commercial District (GC) use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 4-4: ETOD – General Commercial:		
Total Area		17.54 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	12.71 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	923 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	31%
Unit per Acre	*(Total units/Total Area)*	72

Scenario 1: East Transit Oriented District: Total Housing Unit Capacity:

Table 4-5 sums up all the zones within the ETOD site and shows an overall number on how the site performing:

Table 4-5: Scenario 1: ETOD Total Housing Unit Capacity:		
	Total Area	110 Acres
	Total Housing Units Needed	2925
	Total Housing Unit Capacity (ETOD)	4397
	Percentage from Needed Housing *(Housing Unit Capacity/Needed Housing)*	150%
	Unit per Acre *(Total units/Total Area)*	64

In this scenario the ETOD site has the capacity to accommodate for 4397 units within it, and that is more than the Total Needed Housing for the city. In fact, ETOD in scenario 1 has 50% more units than the projected Housing Needs in the City of Central Point. Therefore, a secondary CFA citation is not necessary at this point in time. Overall, the ETOD Property site provide ample room for CFA development to fulfill the requirement of the CFEC rules for 30% of projected needed housing units.

Scenario 2: East Transit Oriented (ETOD) Housing Unit Capacity:
The second scenario will use the boundary that is shown back in Map 5 and other attributes from area size to the city's and DLCD standards, see table 5 for Acreage breakdown for scenario 2. The calculations are broken down by zones and then summarized at the last table:

Table 5: Acreage breakdown: Scenario 2:

Area (Acres)					
LMR	MMR	HMR	CIVIC	EC	Total
22	37	7.43	6	14.14	86.57

Total Housing Unit Capacity: Low Mix Residential (LMR):

Table 6 summarizes the Total Housing Unit Capacity calculation within the Low Mix Residential use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 6: ETOD – LMR:		
Total Area		22 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	15.58 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	905 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	30%
Unit per Acre	*(Total units/Total Area)*	41

Total Housing Unit Capacity: Medium Mix Residential (MMR):

Table 6-1 summarizes the Total Housing Unit Capacity calculation within the Medium Mix Residential use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 6-1: ETOD – MMR:		
Total Area		37 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	26.2 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	1522 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	52%
Unit per Acre	*(Total units/Total Area)*	41

Total Housing Unit Capacity: High Mix Residential (HMR):

Table 6-2 summarizes the Total Housing Unit Capacity calculation within the High Mix Residential use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards. Please note, this zone is a preliminary land use and is planned to replace a portion of the current commercial use at the lower part of the boundary by the intersection of Pine and Hamrick.

Table 6-2: ETOD – HMR:		
Total Area		7.43 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	5.2 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	382 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	13%
Unit per Acre	*(Total units/Total Area)*	51

Total Housing Unit Capacity: Civic (C):

Table 6-3 summarizes the Total Housing Unit Capacity calculation within the Civic use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards.

Table 6-3: ETOD – Civic:		
Total Area		6 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	4.35 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	252 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	8%
Unit per Acre	*(Total units/Total Area)*	41

Total Housing Unit Capacity: Employment Commercial (GC):

Table 6-4 summarizes the Total Housing Unit Capacity calculation within the Civic use in the ETOD. Using the Housing Unit Capacity with City standards, and DLCD standards. Please note, this zone is a preliminary land use and is planned to replace a portion of the current commercial use at the lower part of the boundary by the intersection of Pine and Hamrick.

Table 6-4: ETOD – Employment Commercial:		
Total Area		14.14 Acres
Gross Block Area		6 Acres
Net Developable Area	*(Total Area – R.O.W – Alley Area)*	9.9 Acres
Housing Unit Capacity	*(Using the formula mentioned prior)*	724 Units
Percentage from Needed Housing	*(Housing Unit Capacity/Needed Housing)*	25%
Unit per Acre	*(Total units/Total Area)*	51

Scenario 2: East Transit Oriented District: Total Housing Unit Capacity:

Table 6-5 sums up all the zones within the ETOD site and shows an overall number on how the site performing:

Table 6-5: Scenario 2: ETOD Total Housing Unit Capacity:		
	Total Area	86.57 Acres
	Total Housing Units Needed	2925
	Total Housing Unit Capacity (ETOD)	3779
	Percentage from Needed Housing *(Housing Unit Capacity/Needed Housing)*	128%
	Unit per Acre *(Total units/Total Area)*	43

In this scenario ETOD site has the capacity to accommodate for 3779 units within it, and that is more than the Total Needed Housing for the city. In this scenario, the ETOD can accommodate for the projected needed housing within the city and has the capacity to add 28% more on the projected needed housing units in the ETOD. A secondary CFA citation is not necessary at this point in time. Overall, the ETOD Property site provide ample room for CFA development to fulfill the requirement of the CFEC rules for 30% of projected needed housing units.

Conclusion

With CFA capacity calculated, it's evident that the ETOD can not only host the required number of units, but that the City of Central Point has options when it comes to determining the bounds of CFA. There are numerous pros and cons with each scenario. Ultimately, the technical analysis team recommends that the City of Central Point engage with City Officials and the general public to see which CFA boundary scenario best aligns with their vision for Central Point.

Chapter 3: Anti-Displacement Mitigation Strategies

CFA Redevelopment Outcomes

Due to the nature of the regulations, an area designated as a climate friendly area gains the capability to be redeveloped for a wide variety of uses and dense housing types. While these factors intend to promote nodes not reliant on personal automobile use, they also have the capability of creating modernized, attractive, and competitively priced developments which can subsequently displace protected classes. This trend, known as gentrification, can become an inherit component of a climate friendly areas if cities do not carefully analyze a CFA's location and consider proper phase 2 protections to ensure the developments remains accessible to all populations.

Anti-Displacement Map Analysis

Recognizing this potential threat, DLCD has prepared an anti-displacement guide which classifies areas by neighborhood type which are characterized by their income profile, vulnerable classes, amount of precarious housing, housing market activity, and overall neighborhood demographic change. Each area is identified through the DLCD anti-displacement map, which can be found here: Anti-Displacement Map

Each neighborhood type is categorized by the following:

Affordable and Vulnerable

The tract is identified as a low-income tract, which indicates a neighborhood has lower median household income and whose residents are predominantly low-income compared to the city average. The neighborhood also includes precariously housed populations with vulnerability to gentrification and displacement. However, housing market in the neighborhood is still remained stable with no substantial activities yet. At this stage, the demographic change is not under consideration.

Early Gentrification

This type of neighborhoods represents the early phase in the gentrification. The neighborhood is designated as a low-income tract having vulnerable people and precarious housing. The tract has hot housing market, yet no considerable changes are found in demographics related to gentrification.

Active Gentrification

The neighborhoods are identified as low-income tracts with high share of vulnerable people and precarious housing. Also, the tracts are experiencing substantial changes in housing price or having relatively high housing cost found in their housing markets. They exhibit gentrification related demographic change. The latter three neighborhoods on the table are designated as high-income tracts. They have hot housing market as they have higher rent and home value with higher appreciation rates than the city average. They also do not have precarious housing anymore. However, Late Gentrification type still has vulnerable people with experiences in gentrification related demographic changes. The last two neighborhood types show the exclusive and affluent neighborhoods.

Late Gentrification

This type of neighborhoods does not have predominantly low-income households, but still have vulnerable population to gentrification. Their housing market exhibits the high housing prices with high appreciations as they have relatively low share of precarious housing. The neighborhoods experienced significant changes in demographics related to gentrification.

Becoming Exclusive

The neighborhoods are designated as high-income tracts. Their population is no longer vulnerable to gentrification. Precarious housing is not found in the neighborhoods. However, the neighborhoods are still experiencing demographic change related to gentrification with hot housing market activities.

Advanced Exclusive

The neighborhoods are identified as high-income tracts. They have no vulnerable populations and no precarious housing. Their housing market has higher home value and rent compared to the city average, while their appreciation is relatively slower than the city average. No considerable demographic change is found in the neighborhoods.

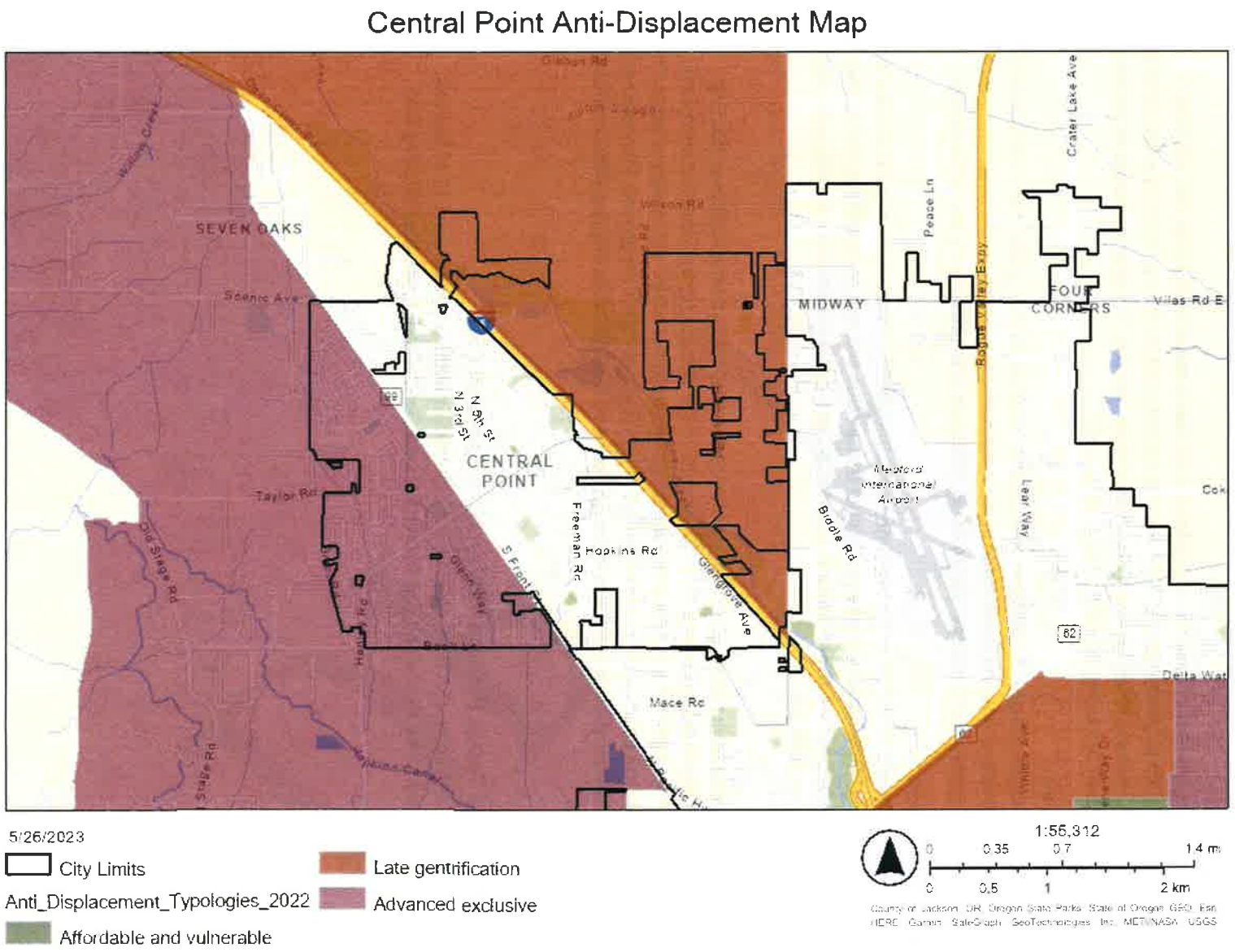
Unassigned

The unassigned tracts have not experienced any remarkable changes in demographics or housing markets. The neighborhood has been stable with unnoticeable change, yet this does not necessarily mean that there is no need for extra care compared to other neighborhoods with assigned types. This neighborhood may call attention to more care of what is actually going on the ground. Planners need to engage with the communities to make sure the neighborhood is stable while aligning with community needs and desires.

Neighborhood Types Present Within the Proposed CFA

As proposed, the candidate CFA for Central Point currently lies within a census tract 11 of Jackson County, which is identified by the neighborhood type: **Late Gentrification**, see the following map.

Map 6. DLCD Anti-Displacement Map:



Suggested Strategies

Referring to DLCD's housing productions strategies, which can be found here, RVCOG has identified the following strategies to ensure that a climate friendly areas acts as an equitable community. In selecting strategies RVCOG prioritized strategies color coded as green for the **Late Gentrification** neighborhood type for their likeliness to generate little to no adverse impact, factoring in local context and feasibility as well.

Category A: Zoning and Code Changes

A03: Density or height bonuses for affordable housing.

Cities could consider introducing a height and density bonus for developments which introduce units between 30% - 120% of the average median income (AMI). RVCOG suggests using the CFA thresholds as a potential model for such bonuses, in the case of Central Point potentially allowing an increased 10 feet of maximum height and additional 5 dwelling units per acre.

A07: Single Room Occupancy

Single room units, such as junior accessory dwelling units, present a new housing typology not commonly considered among residential zones. Enabling this use as a permitted accessory component of a multi-unit development afford developers the opportunity to provide unique housing arrangements and a variety of units at different price points.

A14: Re-examine Mandated Ground Floor Use

The City of Bend has determined that while lively streetscape in a dense environment is a worthy goal, mandating that ground floors be occupied by commercial uses when the surrounding market forces can't support such a use can contribute to decreased development or loss of area for dwelling units.

Category B: Reduce regulatory Impediments

B10: Public Facility Planning

Factoring that some of the proposed CFA sites are largely vacant, assisting in providing public facilities could make these sites more attractive for development. Furthermore, assisting in the providing public facilities may enable the city to prioritize key connections or better plan for expansion in the future.

B07: Flexible Regulatory Concessions for Affordable Housing

Considering that cities within the 10,000-24,999 are in one of the lower ranges for prescriptive CFA standards, enabling affordable housing to move into some of the upper thresholds could present a unique advantage further attract affordable housing. Furthermore, this strategy enables a CFA to evolve directly in response to its City's population growth, possibly resulting in a CFA pre-emptively meeting the next threshold's requirements.

B19: Survey Applicant on Development Program Decision-Making

User feedback can help illustrate frustrations or pitfalls in the planning process not seen by staff. Utilizing a survey as litmus test for ease of development within a CFA can serve as valuable asset not only to the CFA, but the City's Planning department as a whole.

Category C: Financial Incentives

C01: Reduce or exempt SDC's for needed housing.

SDC's are often seen as necessary yet prohibitive cost associated with new development. Affording exemptions for needed dense and affordable housing helps clear the way for development, while commercial developers seeking to capitalize on attractive areas by constructing recreational or properties can bear part of the burden.

C04: Incentivize Manufactured and Modular Housing.

Manufactured and modular housing could be a popular option in vacant CFA areas as it can be constructed for less cost and added on to as a larger population occupies the CFA. Modular housing also supports the owned rather rented housing, a notion that could ensure a CFA acts as equitable community for permanent residents and doesn't become an area merely for vacation rentals.

Category D: Financial Resources

D02: Low Income Housing Tax Credit (LIHTC).

Federal tax credits represent an external opportunity for an affordable housing development to feasibly occur within a city. Disclaiming these opportunities to developers comes at little cost to the city, and can facilitate mixed income housing that contributes to a more diverse set of demographics within a CFA.

D09: Demolition Taxes

A demolition tax can ensure that new development within a CFA introduces a greater density than the existing structure or be forced to be pay a tax to fund a housing trust fund. Demolition taxes help mitigate the effects of higher density, aging housing being replaced by lower density, newer, market-rate homes, which could occur if the CFA is sited in a more historic area of a community, or the introduction of the CFA regulation introduce more affluent populations seeking close proximity to mixed uses.

D09: Construction Excise Tax

Seeing as the CFA's are located on vacant land, a construction excise tax seems to be an apt solution to ensure development of a CFA accrues funds for affordable housing projects both within the CFA and elsewhere.

Category E: Tax Exemption and Abatement

E03: Vertical Housing Development Zone Tax Abatement
This housing production strategy authorized ORS 307.841 directly aligns with the live work environment that's meant to appear within CFA's and is natural candidate to assist in mixed use development. The effectiveness of this strategy could be somewhat bound by a CFA's respective height limits but coupled with affordable housing density bonuses could be quite effective.

E04 & E05: Multiple Unit Tax Exemptions (Property and Limited taxes)
Similar to the Vertical Housing Tax Abatement, the multiple unit tax exemptions could serve as a symbiotic strategy to the type of development intended to occur within a CFA. Whether this strategy seeks to aid in overall feasibility by being a long-term exemption or aid in the initial

E10: Delayed tax Exemptions
Delayed tax exemptions can be seen as a viable strategy to allow new development recoup construction costs and establish a profitable base before falling below 80% AMI. This strategy could benefit initial developments in CFA's, and later assist them in serving a new economic bracket when the area becomes more developed.

Category F: Land, Acquisition, Lease, and Partnerships

F17: Designated Affordable Housing Sites
Designating CFA's partly or entirely as affordable housing sites can ensure the best use of the land in the future. While price control measures may ward off developers initially, highlighting tax exemptions and streamlined planning process coupled with the relative newness of the CFA regulations may highlight these areas as feasible location for affordable housing.

F19: Affordable Housing Preservation Inventory
Identifying and inventorying areas currently hosting affordable housing enables staff to examine what contextual factors have led them to appear in their community, and also informs areas to proceed with caution when expanding the CFA.

City staff are encouraged to review and evaluate the list of strategies when it comes time for phase 2 zoning reform.

Appendix A

Acronyms to Remember:

Regulatory:

- LCDC = Land Conservation & Development Commission
- DLCD = Department of Land Conservation & Development
- OAR = Oregon Administrative Rules
- CFA = Climate Friendly Area
- CFEC = Climate Friendly & Equitable Community

Technical:

- HNA = Housing Needs Assessment
- HCA = Housing Capacity Analysis
- NDA = Net Developable Area
- HUC = Housing Units Captured
- MF = Multifamily Housing
- SF = Single Family Housing

Climate Friendly Areas Study

City of Central Point, OR

June 7th, 2023

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