



Community Development  
407 Birch Ave SW, P. O. Box 810 Napavine, WA 98565  
Phone: (360) 262-9344  
www.cityofnapavine.com

## Notice of Public Hearing

**NOTICE IS HEREBY GIVEN** that City of Napavine has received a Variance Application from Napavine Adventures LLC for the following development proposal:

**Project Proposal:** The Applicant is requesting a Variance to waive public right-of-way improvements on a new triplex. The public right of way improvements the applicant is requesting to be waived are curb, gutter, sidewalks, street light construction, and allow the extension of the existing 17-foot road. The project site is .29 acres.

**Project Location:** 416 (A-C) E Newaukum Ave Napavine, Washington - Tax Parcel #008243001001  
(Section 26 Township 13N Range 02W LTS 6 & 7 BLK 26 ROWELLS ADD)

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**Hearing Date and Location:**      **April 8, 2024, 10:00 AM**  
   **Napavine City Hall - Council Chambers**  
   **407 Birch Ave SW**  
   **Napavine WA 98565**

**City Contact:**

Bryan Morris, Director of Public Works  
Phone: (360) 262-9344  
Email: [bmorris@cityofnapavine.com](mailto:bmorris@cityofnapavine.com)  
Mail: PO Box 810, Napavine, WA 98565

View the complete application online:  
<https://www.cityofnapavine.com/communitydev/page/public-notice>

**Date Application Received:**                      **January 3, 2024**

**Date of Complete Application:**              **January 18, 2024**

Anyone interested may appear and be heard. The decision of the Hearing Examiner will be sent to all those who submit comments, testify at the hearing, or request the decision in writing. Any aggrieved party of record can file an appeal with Lewis County Superior Court. Written comments about this application must be submitted to Bryan Morris at the listed address above. If you have any questions, please visit the website or call.

**\*\*WRITTEN PUBLIC COMMENTS CAN BE ACCEPTED UNTIL 9:30 AM ON April 8, 2024\*\***



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## Staff Report

### GENERAL INFORMATION

**Applicant:** Napavine Adventures LLC

**Property Owner:** Napavine Adventures LLC

**Purpose:** Variance to waive public right-of-way improvements for a new triplex. Requested right-of-way improvements to be waived are curb, gutter, sidewalks, and street lighting construction. Also requesting extension of existing 17-foot road.

**Address:** 416 (A-C) E Newaukum Street (assigned address when prior variance (expired) was approved)

**Parcel Number:** 008243001001 - (Section 26 Township 13N Range 02W LTS 6 & 7 BLK 26 ROWELLS ADD)

**Zoning:** Residential 3 (R3)

**Surrounding Land Use:** Residential 3 (R3), Residential 2 (R2), Bare Land, Residential 3 (R3)

**Application Date:** January 3, 2024

**Review Date:** January 18, 2024

### I. BACKGROUND

The applicant is requesting a Variance to waive public right-of-way improvements on a new triplex. The public right-of-way improvements the applicant is requesting to be waived are curb, gutter, sidewalks, street light construction, and allow the extension of the existing 17-foot road. The applicant was approved for a Variance through City Council in June 2022 to waive public improvements of curb, gutters, and sidewalks. The applicants' engineer agreed to extend the existing 17-foot road to a full 22-foot width road and provide streetlighting on E. Newaukum Street. The city processed a building permit that was ready to be picked up on June 30, 2022, but that building permit was never pursued. The Variance expired 6 months later, when no substantial construction had begun on the project.

### II. POLICY CONSIDERATIONS

#### Napavine Municipal Code (Exhibit E)

NMC 12.04.060 New Residential sub-division streets (Sections A. B. & G.)

NMC 15.06.050 Fire Access Road Requirements (Section E.)

#### The City of Napavine Public Works Standards (Exhibit F)

Illumination 2D.02 Design Standards

Streets - 2B.02 Design Standards

Streets - 2B.04 Signing and Striping

Streets - 2B.07 Street Frontage Improvements

Roadside Features - 2F.07 Mailboxes

### **III. REVIEW OF VARIANCE STANDARDS**

**Napavine Municipal Code 17.80.040 Variances** guides the Hearing Examiner in how to review variance requests:

*Where unnecessary hardships and practical difficulties, resulting from peculiarities of a specific property, render it difficult or inequitable to carry out all provisions of this title, the board shall have the power to grant a variance if it finds that the following conditions are met:*

- (1) The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and zone in which subject property is located; and**

Staff finds that granting the Variance will grant a special privilege inconsistent with limitation upon uses of other properties in the vicinity and zone in which subject property is located. There are 36 acres of undeveloped R2 land to the east of the subject property. Granting the variance may limit the use of that property for future development.

- (2) Such variance is necessary, because of special circumstances relating to the size, shape, topography, location, or surroundings of the subject property, to provide it with use rights and privileges permitted to other properties in the vicinity and in the zone in which the subject property is located; and provided that such unusual circumstances or conditions do not exist throughout the neighborhood or zone in which the property is located, and provided further that such unusual circumstances or conditions have not been created by action of the applicant; and**

Staff find that there are no special conditions which are peculiar to the land and structure.

- (3) The granting of such variance will not be materially detrimental to the public welfare of injurious to the property or improvements in the vicinity and zone in which the subject property is situated; and**

Staff find that the granting of such a variance will be materially detrimental to public welfare because of future improvements to the adjacent undeveloped 36 acres.

- (4) The granting of such variance will not adversely affect the comprehensive plan; and**

Staff find that granting the variance will not adversely affect the comprehensive plan.

- (5) The variance, if granted, will not alter the essential character of the neighborhood or district in which the property is located, nor substantially or permanently impair the appropriate use or development of the adjacent property; and**

Staff find that the granting of such a variance will impair the appropriate use or development of adjacent property.

The variance so authorized shall become void after the expiration of six months if no substantial construction has taken place in accordance with the plans for which the variance was authorized.

**IV. RECOMMENDATION**

Based on a review of the application according to the stringent evaluation criteria contained within the City Code and Public Works Standards, staff recommends **DENIAL** of the requested variance.

**V. CONDITIONS OF APPROVAL**

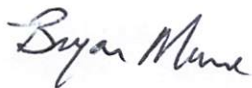
If the variance is approved consistent with the site plan submitted with this application, staff recommends that the approval shall be subject to the following:

1. The applicant must widen and expand the existing 17-foot road to a 22-foot road and extend to the furthest extent of the property.
2. Provide streetlighting on E. Newaukum Street.

**VI. EXHIBIT LIST**

- Exhibit A. Variance Application
- Exhibit B. Public Hearing Documents
- Exhibit C. Site Plan
- Exhibit D. City Council Findings, Conclusions Decision on expired Variance Application
- Exhibit E. Napavine Municipal Codes - Policy Considerations
- Exhibit F. Napavine Public Works Standards - Policy Considerations

*Sincerely,*



*Bryan Morris*

*Public Works/Community Development Director*

CITY OF NAPAVINE

407 BIRCH AVE SW, P.O. BOX 810, NAPAVINE, WA 98565  
(360) 262-9344

VARIANCE APPLICATION

Fee: \$ 500.00

File No.: VA 01-24

Date: \_\_\_\_\_

Applicant: Napavine Adventures, LLC – Kevin Klumper  
 Applicant's Address: 790 S. Market Blvd., Chehalis, WA 98532  
 Location of Property: 0 E. Newaukum Street, Napavine, WA 98565 – 008243-001-001  
 Lot: 6 & 7 Block: 26 Addition: Rowells

- A. The above described property was acquired on May 24, 2021.
- B. A certificate of ownership and a list of owners of property located within 300 feet of this parcel must accompany this application.
- C. Do covenants, conditions or restrictions concerning type of improvements contemplated exist on the property? No. If so, attach a copy of said document to this application.
- D. I HEREBY REQUEST A VAIRANCE AS FOLLOWS:

(Please explain the hardship for which you are requesting a variance to alleviate.)

NAPAVINE ADVENTURES, LLC – KEVIN KLUMPER, is requesting a Variance to waive right-of-way improvements on a new triplex. The public right-of-way improvements Napavine Adventures, LLC is requesting to waive: are curb, gutter, sidewalks, and street lighting construction and allow extension of the existing 17-foot road matching the recent construction approved for East Newaukum Street. Due to the variance allotted to the developer on the north side of East Newaukum Street, the half street improvements would not align with the existing road.

Your approval of the requested variance would permit me to use my property in the following manner:  
Approval of the variance would allow the parcel to develop as a new triplex townhome development.

1. Would the strict application of the Zoning Regulations create practical difficulties or unnecessary hardships for you? (Please explain.)  
Yes, due to the variance allotted to the developer on the north side of E. Newaukum St., the half street improvements would not line up. Our variance is to extend the extension half street improvement consistent with the previous development work.
2. Are there exceptional circumstances of conditions applicable to this property or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood? (Please explain.)  
Yes, the construction of required frontage half street would not align with the existing road.

3. Will the granting of a variance be significantly detrimental to the public welfare or injurious to the other property of improvements in your zone or neighborhood in which your property is located? (Please explain.)

No, road and public utilities will be extended as required to provide fire and life safety access to the site.

[Signature]  
Signature of Applicant

790 S. Market Blvd.  
Chehalis, WA 98532  
Address

(360) 219-3978  
Telephone Number

Variance Fee: \$ \_\_\_\_\_  
Receipt No.: \_\_\_\_\_  
Date Paid: \_\_\_\_\_

STATE OF WASHINGTON )  
 )  
COUNTY OF Lewis ) SS

On the 2nd day of January, 2024, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Kevin T. Klumper, being duly sworn, on his/her oath deposes and says that he/she prepared and read the foregoing statements and has acknowledged to me that the recitation contained therein are true, and has signed this instrument at his/her free and voluntary act and deed for the purposes therein mentioned.

Subscribed and sworn to before me this 2nd day of January, 2024.

My Commission expires: 3-29-2024

Anne-Marie Elam  
Notary Public in and for the State of Washington

Residing at: Chehalis



\_\_\_\_\_  
Community Development Director

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Date



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**\*\*WRITTEN PUBLIC COMMENTS CAN BE ACCEPTED UNTIL 9:30 AM ON April 8, 2024\*\***

Charles & Kendra Maslowski  
Po Box 936  
Napavine, WA 98565

Michael J Mikota  
Po Box 334  
Napavine, WA 98565-0334

Napavine School Dist 14  
Po Box 840  
Napavine, WA 98565

Steven & Kayla Von Seggern  
Po Box 66805  
Saint Louis, MO 63166-6805

Andy & Marie Douglas  
612 W Grand Blvd  
Chehalis, WA 98532-8869

Todd & Kelly Kelley  
Po Box 1251  
Napavine, WA 98565-1251

Diane Armitage  
Po Box 1224  
Napavine, WA 98565

Raghorn Investments Llc  
Po Box 1338  
Napavine, WA 98565

Robert Slempe  
Po Box 355  
Napavine, WA 98565-0355

Chase Barragar  
236 Chehalis Valley Dr  
Chehalis, WA 98532

Ethan White & Kindra Davis  
Po Box 1228  
Napavine, WA 98565

Michael Renfro & Regan Givens  
Po Box 6452  
Olympia, WA 98507

Sean Kiffer  
Po Box 1013  
Napavine, WA 98565-1013

Darlene R Owens  
Po Box 982  
Napavine, WA 98565

Don Day  
3251 Jackson HWY  
Chehalis, WA 98532-8636



## Surrounding Parcels

PARCEL NO.	ADDRESS	PROPERTY OWNER
008366001002	0 E Stella St.	Charles & Kendra Maslowski
018170002000	0 E Stella St.	Charles & Kendra Maslowski
008233005000	500 E Stella St.	Charles & Kendra Maslowski
008233006000	0 E Stella St.	Michael Mikota
008234001002	0 E Stella St.	Michael Mikota
018170001002	0 E Stella St.	Napavine School Dist. 14
008365000000	0 E Rowell St.	Napavine School Dist. 14
008201000000	0 3rd Ave NE	Napavine School Dist. 14
018170001001	0 E Park St.	Napavine School Dist. 14
008244000000	404 4th Ave NE	Napavine School Dist. 14
008232000000	716 4th Ave NE	Steven & Kayla Von Seggern
008230000000	710 4th Ave NE	Andy & Marie Douglas
008229000000	704 4th Ave NE	Todd & Kelly Kelley
008217002000	313 E Stella St.	Diane Armitage
008243001002	416 E Park St.	Raghorn Investments LLC
008236001000	404 E Newaukum St.	Robert Slemp
008234001001	413 E Newaukum St.	Chase Barragar
008219001000	709 4th Ave NE	Ethan White & Kindra Davis
008209001000	611 4th Ave NE	Sean Kiffer
008209002000	601 4th Ave NE	Michael Renfro & Regan Givens
008208002000	625 4th Ave NE	Darlene Owens
008233003000	413 E Stella St.	Don Day

**Katie Williams**

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**From:** Ronda Barr <rbarr@chronline.com>  
**Sent:** Tuesday, March 26, 2024 3:34 PM  
**To:** Katie Williams  
**Cc:** CDPW Admin; Bryan Morris  
**Subject:** Re: Notice of Public Hearing - City of Napavine

**CAUTION:** External Email

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Katie,

I have received your legal and I will get it scheduled to run March 28th. Thanks and have a wonderful week. Ronda

Thank You!  
Ronda Pogorelc  
Customer Service Manager  
CT Publishing  
The Chronicle/The Reflector/Nisqually Valley News  
360-736-3311 Ext 101

On 3/26/2024 3:28 PM, Katie Williams wrote:

Ronda,

Attached you will find a Notice of Public Hearing for the City of Napavine. Please run this in the Thursday March 28<sup>th</sup> edition of the newspaper.

Thank you,

*Katie Williams  
Community Development/Public Works  
Executive Assistant  
City of Napavine  
(360) 262-9344  
(360) 262-9199-fax*

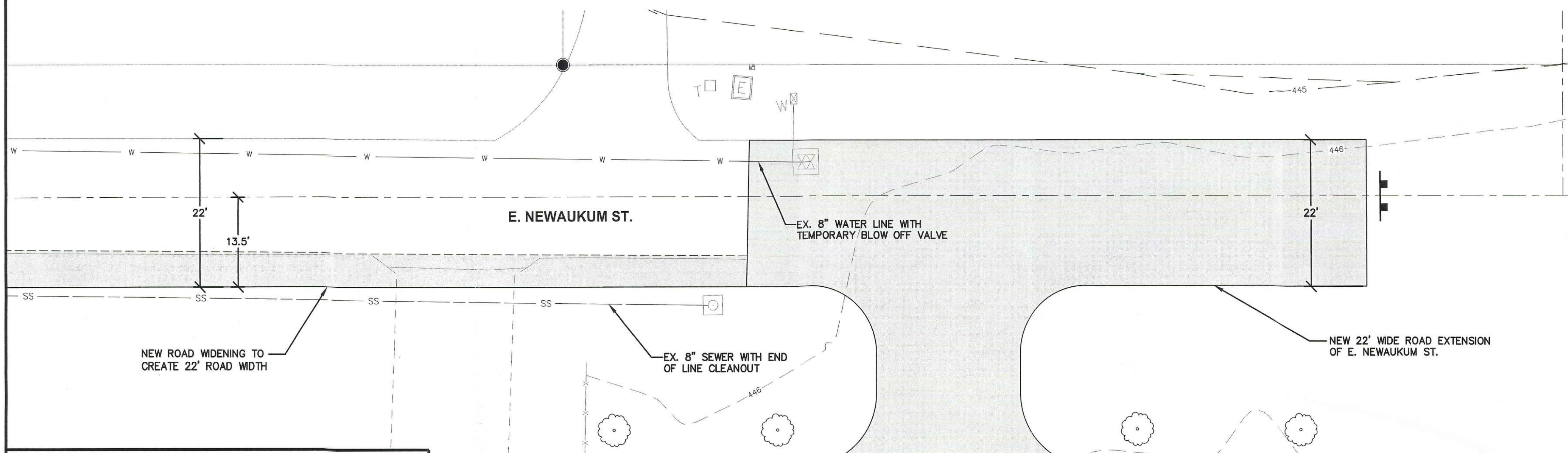
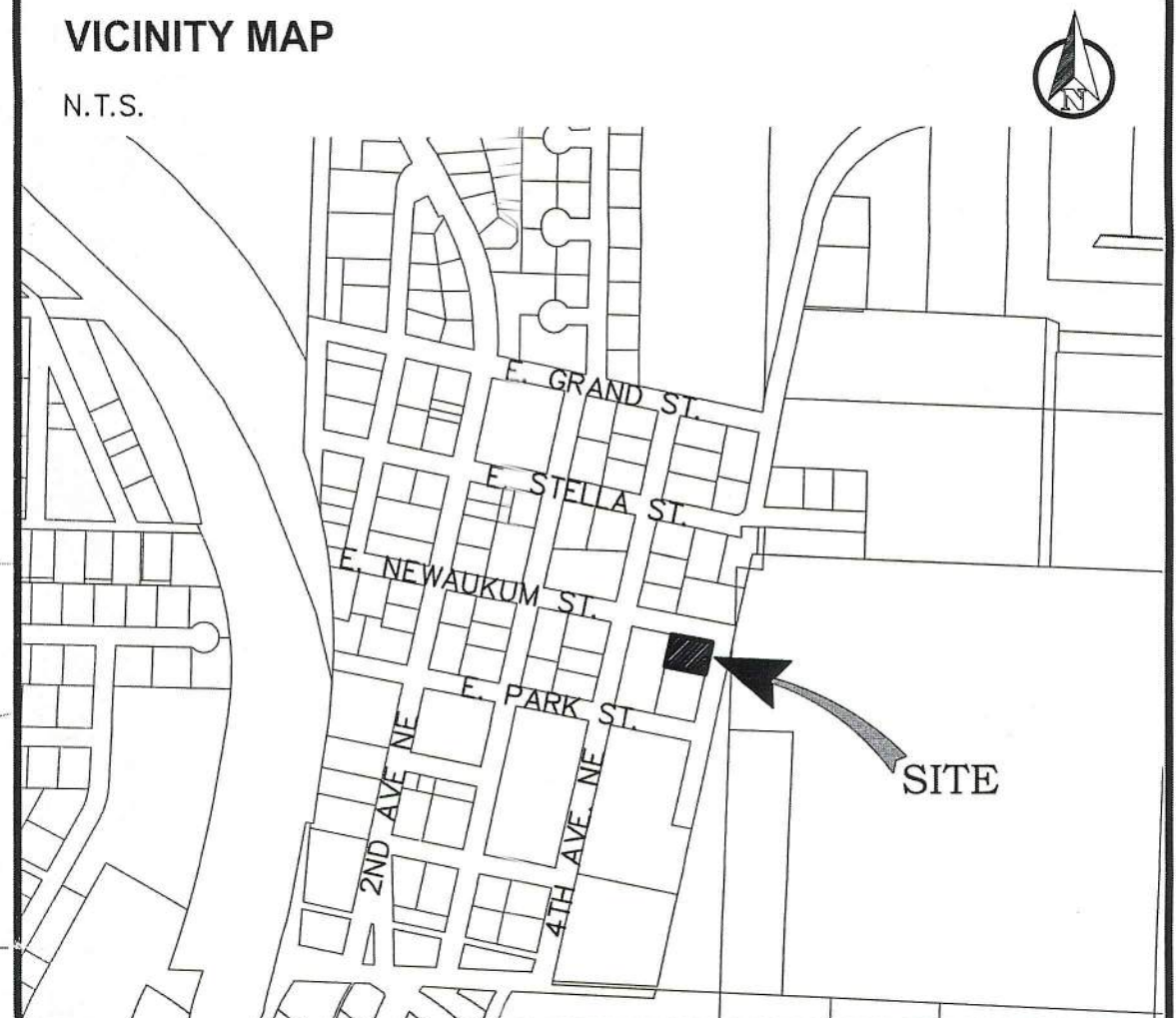
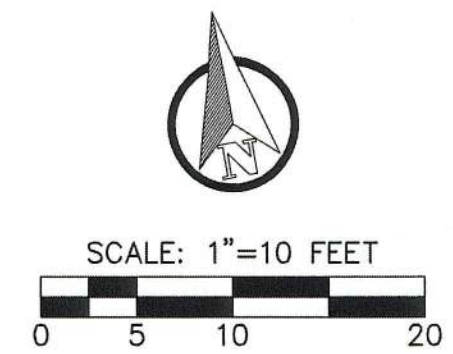
*Disclaimer: Public documents and records are available to the public as provided under the Washington State Public Records Act (RCW 42.56). This e-mail may be considered subject to the Public Records Act and may be disclosed to a third-party requestor.*



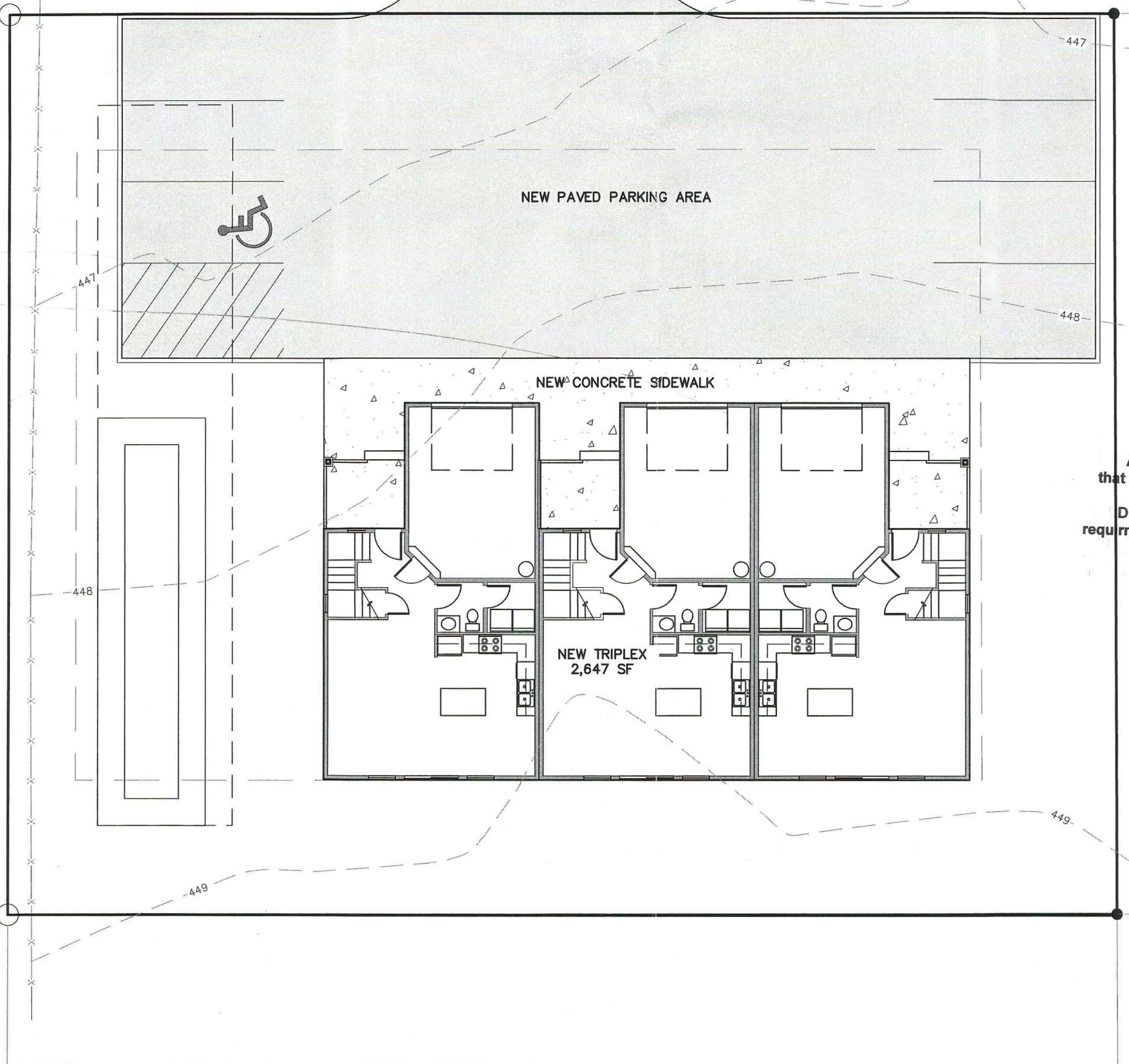
Virus-free. [www.avast.com](http://www.avast.com)

# NEWAUKUM ST. TRIPLEX

SECTION 26, TOWNSHIP 13 NORTH, RANGE 02 WEST, W.M.  
LEWIS COUNTY, WASHINGTON



LEGEND		
EXISTING	PROPOSED	
— W —	— W —	WATER MAIN
— SS —	— SS —	SANITARY SEWER MAIN
— FM —	— FM —	FORCE MAIN
— SD —	— SD —	STORM MAIN
— RD —	— RD —	ROOF DRAIN
— G —	— G —	FOOTING DRAIN
— UGP —	— UGP —	GAS LINE
— T —	— T —	POWER LINE
— TV —	— TV —	TELEPHONE LINE
—	—	CABLE TV LINE
—	—	ROADWAY CENTERLINE
—	—	RIGHT-OF-WAY LINE
—	—	EASEMENT LINE
—	—	FRONT/BACK OF CURB
—	—	EDGE OF GRAVEL SHOULDER
—	—	EDGE OF PAVEMENT
OBO	●	BLOWOFF ASSEMBLY
α	●	FIRE HYDRANT
⊗	⊗	GATE VALVE
□	▲	THRUST BLOCKING
□	■	WATER METER BOX
□	■	CAP/PLUG
□	■	STORM DRAIN CATCH BASIN
○	●	STORM DRAIN MANHOLE
○	●	CLEANOUT
○	●	SEWER MANHOLE
○	●	SEWER CLEANOUT
⊕	⊕	POWER POLE
⊕	⊕	POLE ANCHOR
⊕	⊕	TELEPHONE RISER
⊕	⊕	SIGN



Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

CITY OF NAPAVINE PERMITS  
JUN 08 2022  
BM APPROVED

PROJECT INFORMATION	
APPLICANT:	KEVIN KLUMPER K&W PROPERTIES 790 S. MARKET BLVD. CHEHALIS, WA 98532 (360) 748-0420
PARCEL NOS:	008243001001
SITE ADDRESS:	"0" E. NEWAUKUM ST. NAPAVINE, WA 98532
ZONING:	R3 - CITY
SITE AREA:	0.29 ACRES
GRADING:	240± CY FILL, 170 CY CUT
SOILS:	167 - PRATHER SILTY CLAY LOAM
SANITARY SEWER:	CITY OF NAPAVINE
WATER:	CITY OF NAPAVINE

SHEET INDEX	
C0.1	CIVIL COVER SHEET AND SITE PLAN
C1.1	HORIZONTAL CONTROL PLAN
C1.2	HORIZONTAL CONTROL DETAILS
C2.1	ROAD, GRADING, AND DRAINAGE PLAN
C2.2	DRAINAGE DETAILS
C2.3	DRAINAGE & T.E.S.C. DETAILS
C3.1	WATER AND SEWER SERVICE PLAN AND PROFILE
C3.2	WATER DETAILS AND NOTES
C3.3	SEWER DETAILS AND NOTES
C3.4	STREET LIGHT DETAILS
C4.1	T.E.S.C. PLANS

SURVEY INFORMATION	
LEGAL DESCRIPTION	
SECTION 26 TOWNSHIP 13N RANGE 02W LOTS 9 & 10 & VAC 5TH AVE ADJ & N 20' VAC NEWAUKUM ST ADJ EX TRI E ROWELLS ADD	
VERTICAL DATUM	
ASSUMED	
BASIS OF BEARING	
ASSUMED	

**GEOTECHNICAL NOTE**  
A GEOTECHNICAL REPORT WAS NOT PREPARED FOR THIS PROJECT. IN LIEU OF A REPORT, ALL RETAINING WALL CONSTRUCTION, EARTHWORK, SUB-GRADE PREPARATION, AND PAVING ACTIVITIES SHALL COMPLY WITH THE STANDARD SPECIFICATIONS AND THE IBC.

**WORK IN COUNTY RIGHT-OF-WAY**  
CONTRACTOR TO OBTAIN RIGHT OF WAY PERMIT PRIOR TO ANY WORK WITHIN CITY RIGHT OF WAY. ALL WORK WITHIN CITY RIGHT OF WAY SHALL ADHERE TO CITY STANDARDS AS OUTLINED IN THE RIGHT OF WAY PERMIT.

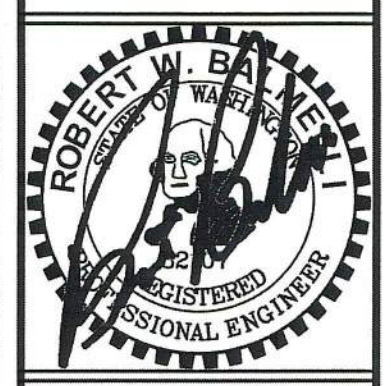
**TOPOGRAPHIC NOTE**  
TOPOGRAPHIC INFORMATION DEPICTED HEREON WAS PROVIDED BY BUTLER LAND SURVEYING. TOPOGRAPHIC INFORMATION WAS NOT FIELD VERIFIED BY RB ENGINEERING.

NO.	DATE	REVISION
1	6.6.22	1st CITY REVIEW COMMENTS

DESIGNED BY:	ZRW
DRAWN BY:	ZRW
CHECKED BY:	RWB
DATE:	5/24/2022
SCALE:	1" = 10'

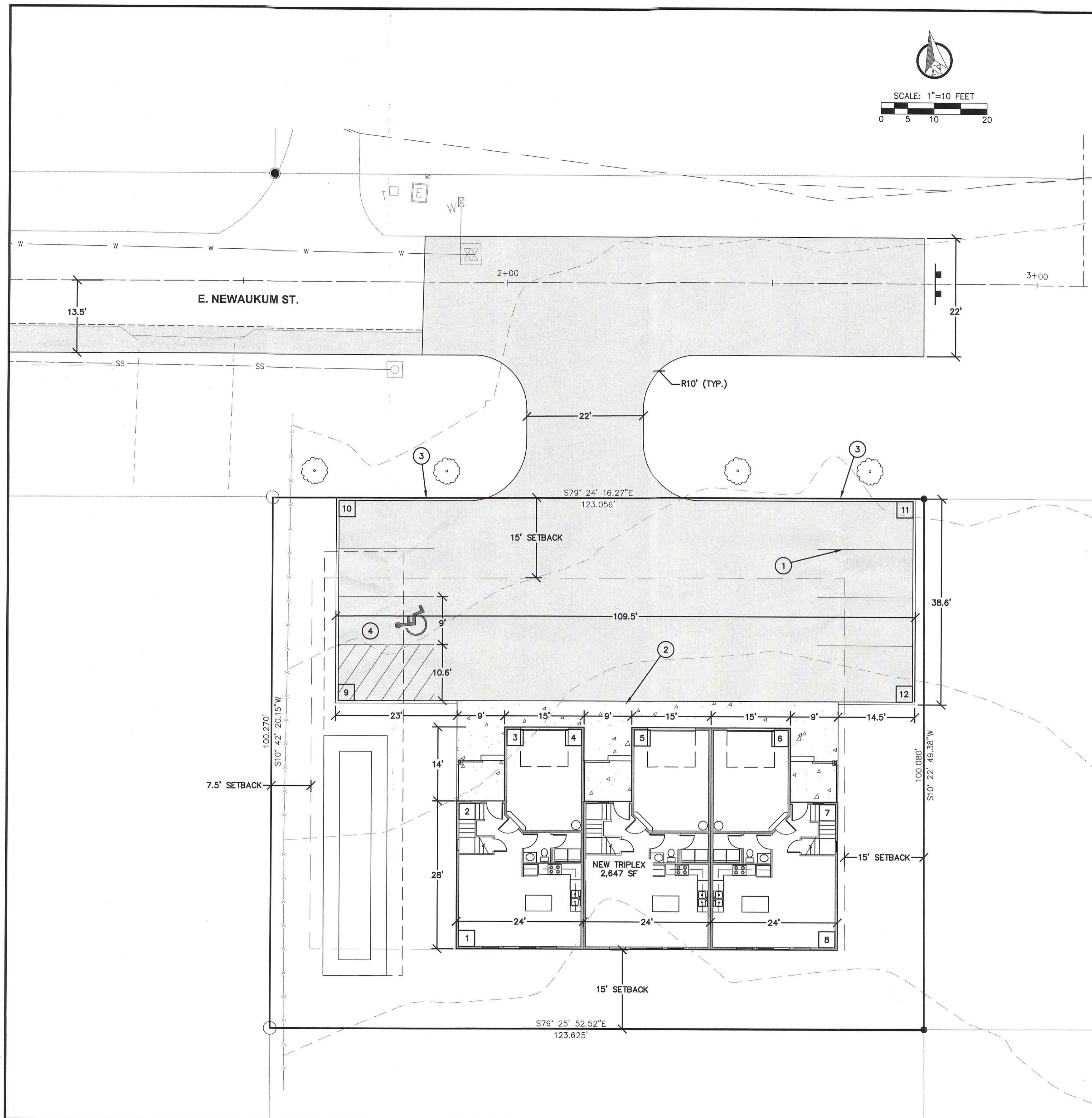
NEWAUKUM ST. TRIPLEX  
CITY OF NAPAVINE, WA.

CIVIL COVER SHEET AND SITE PLAN



**RB Engineering**  
DESIGN - PERMIT - MANAGE  
P.O. Box 923  
CHEHALIS, WA 98532  
OFF: (360) 740-8919  
EMAIL: info@rbengineers.com

**811** Know what's below. Call 811 before you dig.  
JOB NUMBER: 21068  
DRAWING NAME: 21068\_COVR  
**C0.1**  
1 OF 11



**HORIZONTAL CONTROL NOTES:**

- ① INSTALL NEW 9'x18' PARKING STALLS PER PLAN AND DETAIL ON SHEET C1.2
- ② INSTALL NEW 5' SIDEWALK PER PLAN AND DETAIL ON SHEET C1.2. MAX CROSS SLOPE OF 2%.
- ③ INSTALL NEW EXTRUDED CURB PER PLAN AND DETAIL ON SHEET C1.2.
- ④ STRIPE NEW HANDICAP AND ACCESS STALL PER PLAN AND DETAIL ON SHEET C1.2.

COORDINATE TABLE			
Point #	Description	Northing	Easting
1	BUILDING	10981.78	13818.51
2	BUILDING	11009.31	13823.66
3	BUILDING	11021.41	13835.08
4	BUILDING	11018.65	13849.83
5	BUILDING	11017.00	13858.67
6	BUILDING	11011.48	13888.16
7	BUILDING	10996.07	13894.44
8	BUILDING	10968.54	13889.29
9	PARKING	11032.12	13805.04
10	PARKING	11069.07	13811.98
11	PARKING	11049.11	13918.60
12	PARKING	11012.17	13911.69

Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

CITY OF NAPAVINE  
**PERMITS**  
 JUN 08 2022  
*bm*  
 APPROVED

REVISION	1st CITY REVIEW COMMENTS
NO. DATE	1 6.6.22
DESIGNED BY:	ZRW
DRAWN BY:	ZRW
CHECKED BY:	RWB
DATE:	5/24/2022
SCALE:	1" = 10'

**NEWAUKUM ST. TRIPLEX**

CITY OF NAPAVINE, WA.

**HORIZONTAL CONTROL PLAN**

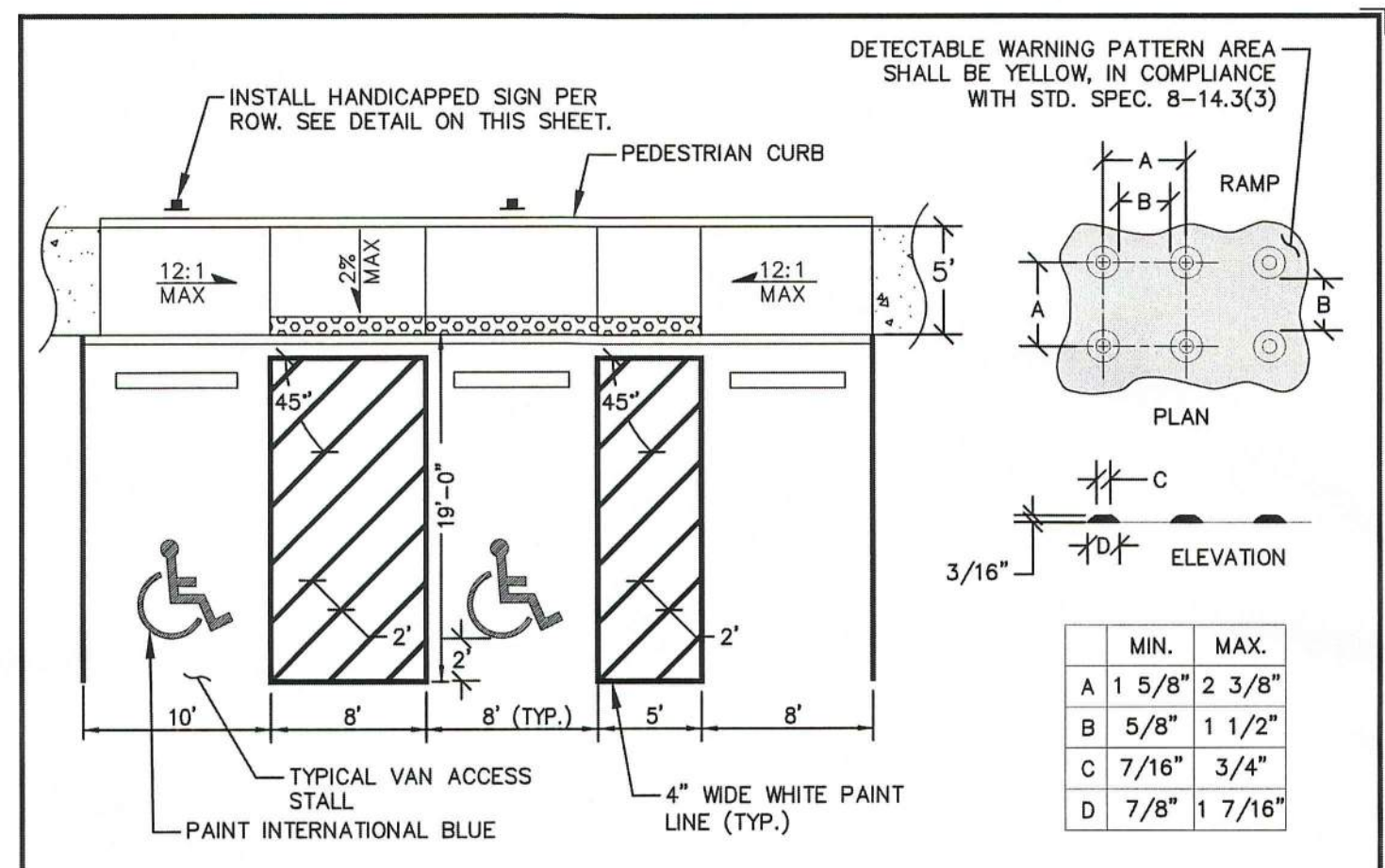
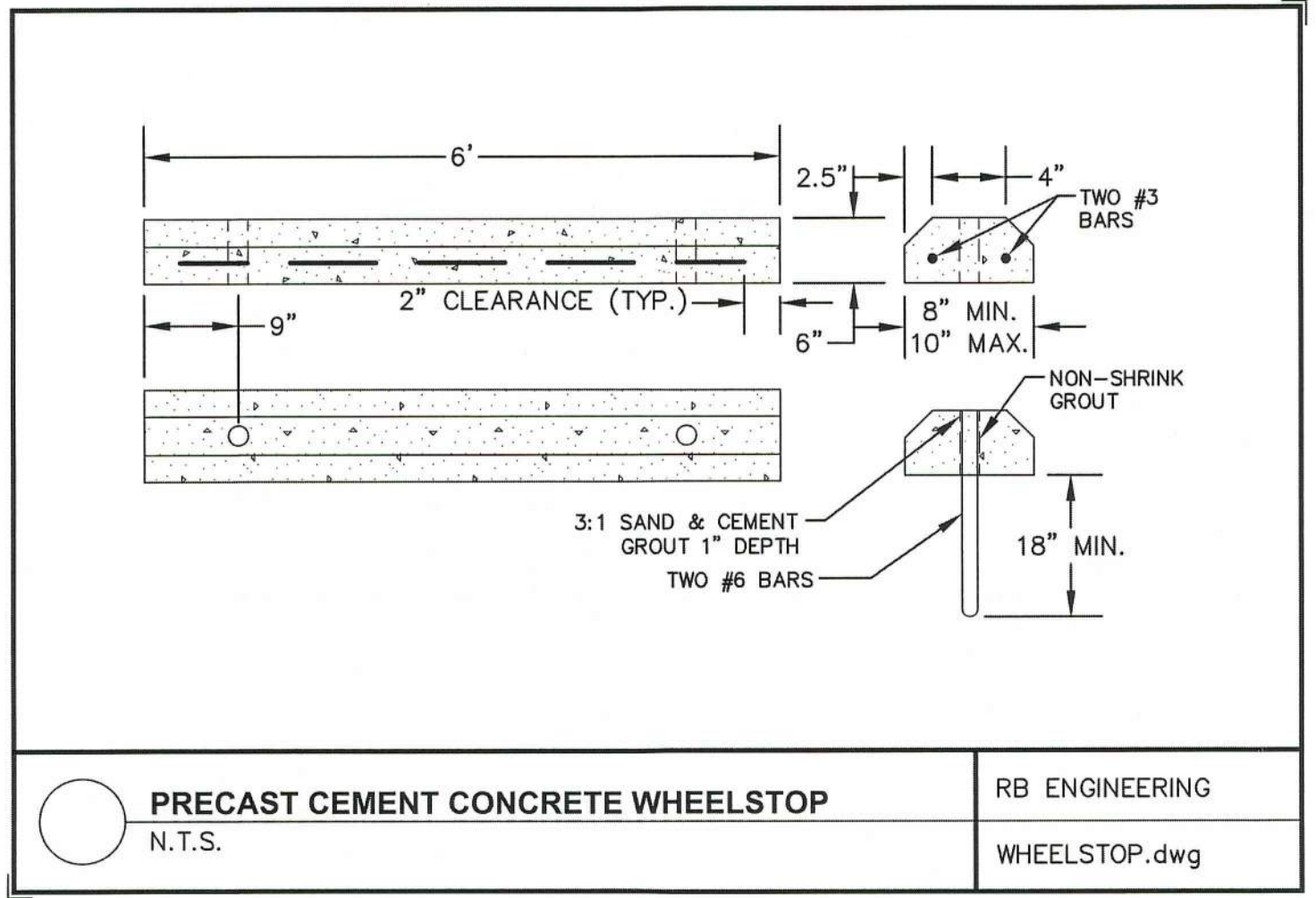
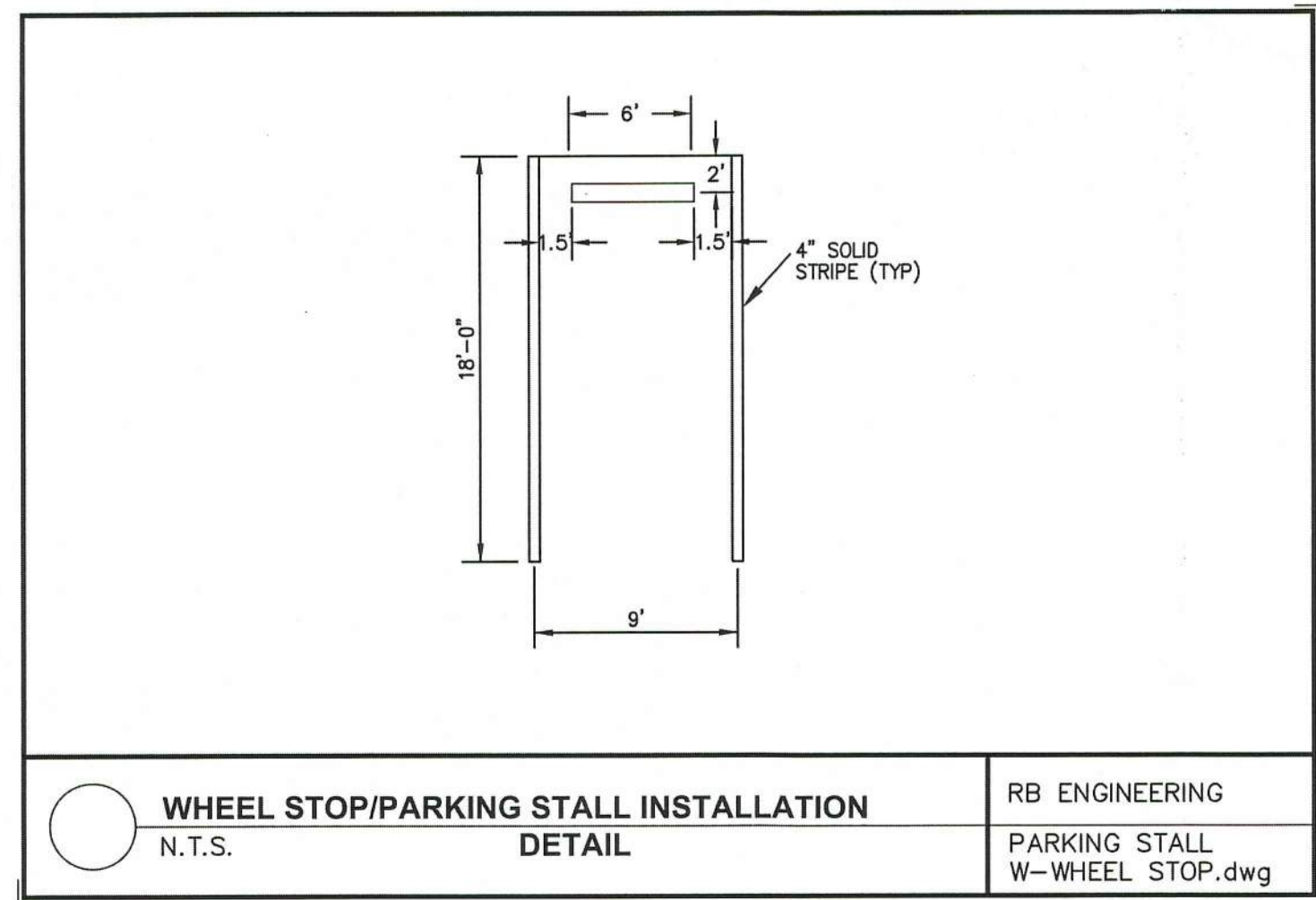
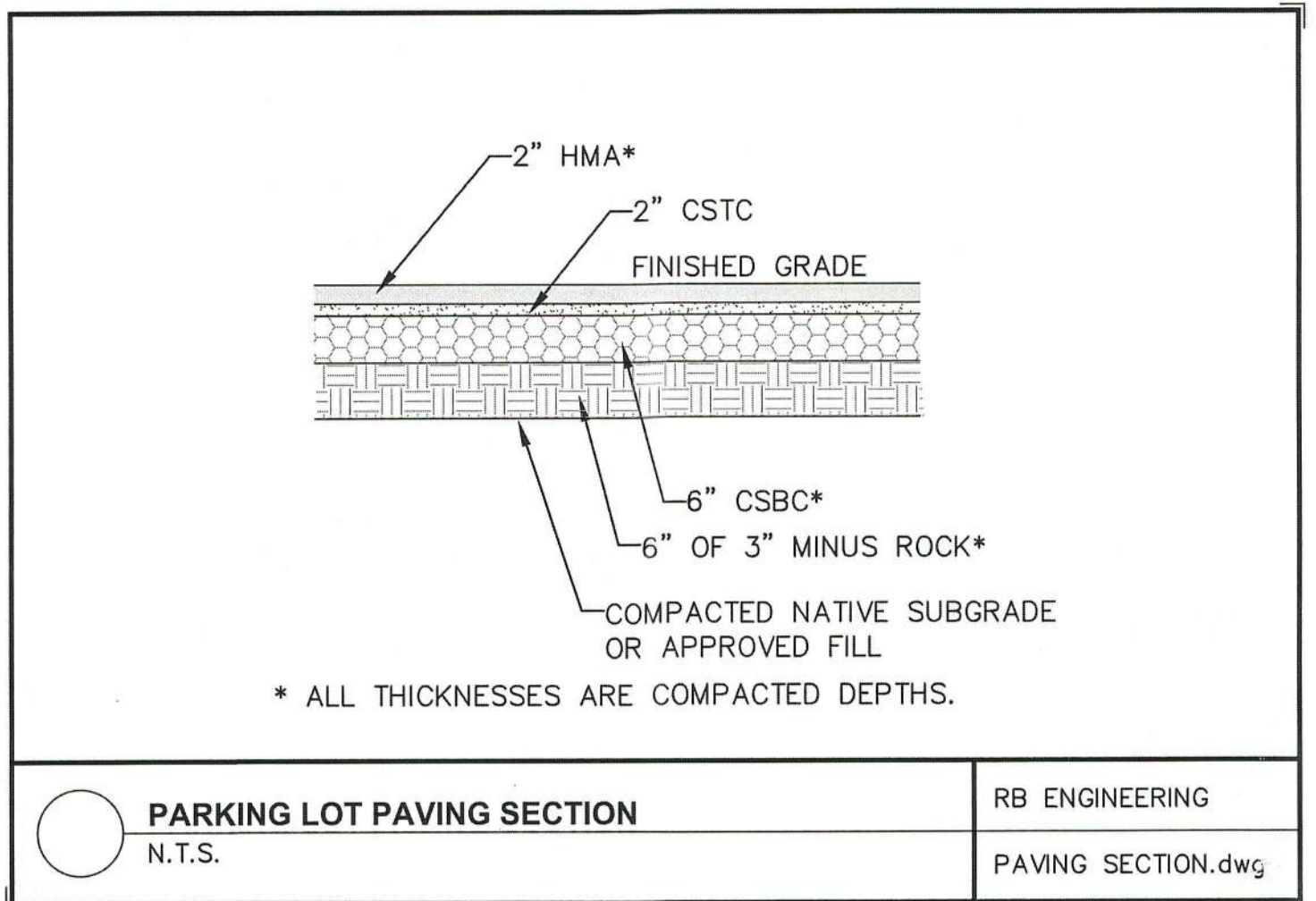
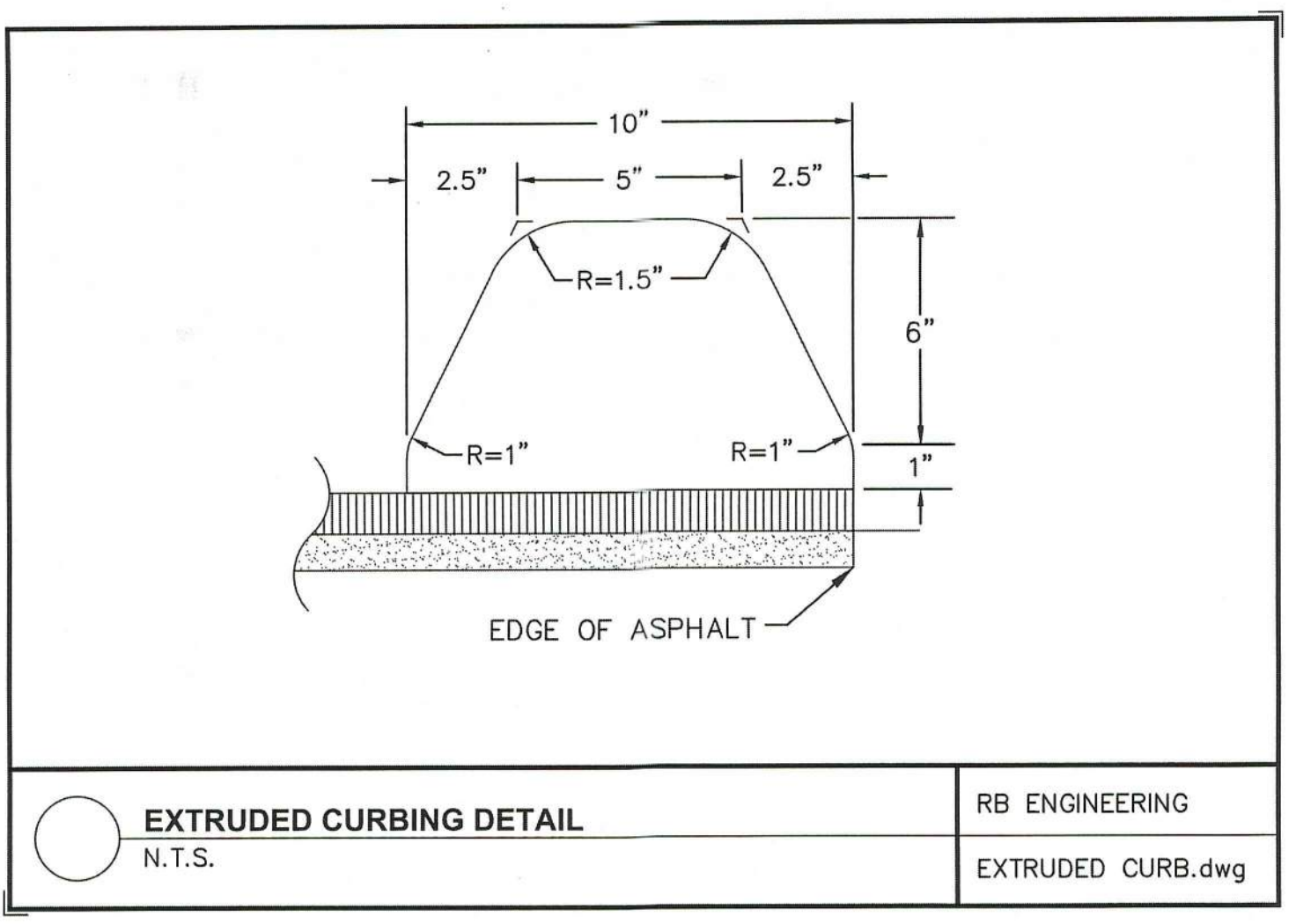
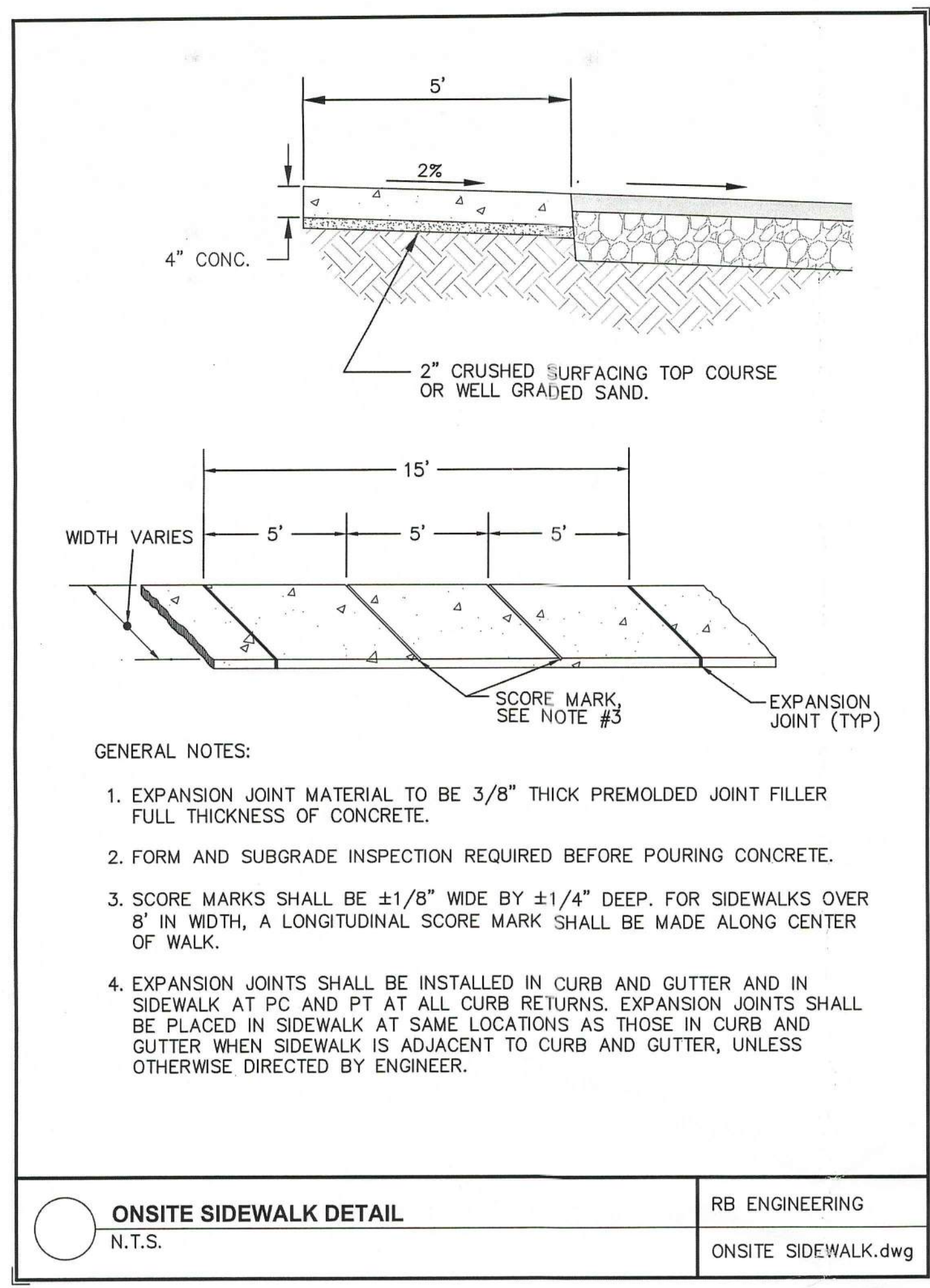
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 OFF: (509) 740-8919  
 EMAIL: CalPro@RBEngineering.com  
 P.O. Box 923  
 CHEWAS, WA 98532

811 Know what's below. Call 811 before you dig.

JOB NUMBER  
21068

DRAWING NAME  
21068\_HCPL

**C1.1**  
2 OF 11



**STANDARD ROAD CONSTRUCTION NOTES**

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND LEWIS COUNTY ROAD STANDARDS.

INSPECTION OF THE STORM DRAIN SYSTEM MUST BE CALLED FOR BEFORE ANY BACKFILL IS PLACED FOR THE DRAIN SYSTEM.

CATCH BASINS SHALL BE TYPE 1 WITH B-2A, WSDOT STANDARD PLANS, FRAME AND GRATE UNLESS OTHERWISE NOTED. THE OUTSIDE EDGE OF THE CATCH BASIN SHALL BE PLACED AT THE INTERSECTION OF THE CURB AND GUTTER AND 0.010' TO 0.015' BELOW FINISHED GRADE, OR IN THE GUTTER LINE OF THE ROLLED EDGE SECTION.

IF ADEQUATE INSPECTION IS NOT CALLED FOR BEFORE COMPLETION OF THE ROADWAY CONSTRUCTION, IT MAY BE NECESSARY FOR CORE DRILLING AND TESTING TO BE PERFORMED TO ASSURE AN ACCEPTABLE QUALITY OF ROADWAY. WHEN CORE DRILLING IS FOUND TO BE NECESSARY, THE APPLICANT WILL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED.

IT WILL BE THE APPLICANT'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES IN ORDER TO ASSURE THAT ALL LINES, PIPES, POLES AND OTHER APPURTENANCES ARE PROPERLY LOCATED AND THEIR INSTALLATION IS COORDINATED WITH THE ROAD CONSTRUCTION. ALL UTILITY RELOCATION WORK SHALL BE AT THE EXPENSE OF THE APPLICANT AND MUST BE IN ACCORDANCE WITH LEWIS COUNTY ROAD STANDARDS PRIOR TO ROAD ACCEPTANCE.

CULVERT PIPE SHALL BE CONCRETE, ALUMINUM OR PLASTIC 12-INCH DIAMETER MINIMUM PIPE WITH BEVELED ENDS UNLESS OTHERWISE NOTED. BEVELED ENDS SHALL BE A MINIMUM OF 3:1 IN THE DITCH LINE OR MATCH THE SLOPE IN A CUT OR FILL SECTION.

BURIED UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE APPLICANT SHALL HAVE THE UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION.

ONSITE EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE APPLICANT AND BE IN PLACE PRIOR TO CONSTRUCTION. ANY PROBLEMS OCCURRING BEFORE FINAL ACCEPTANCE BY LEWIS COUNTY AND WITHIN 24 MONTHS THEREAFTER SHALL BE CORRECTED BY THE APPLICANT.

ANY REVISIONS TO PLANS MUST BE MADE BY THE PROJECT ENGINEER AND APPROVED BY THE COUNTY PRIOR TO ANY IMPLEMENTATION IN THE FIELD.

ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD AND THE LEWIS COUNTY STANDARD PAVEMENT MARKING DETAILS.

BEFORE STRIPING TAKES PLACE THE APPLICANT SHALL CONTACT THE LEWIS COUNTY TRAFFIC DIVISION FOR COORDINATION OF THE STRIPING.

A COPY OF THE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

LEWIS COUNTY SHALL BE NOTIFIED 72 HOURS BEFORE CONSTRUCTION IS STARTED. THE APPLICANT SHALL BE RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION CONFERENCE WITH THE COUNTY, OTHER JURISDICTIONS, PROJECT ENGINEER, UTILITY COMPANIES, SUBCONTRACTORS AND OTHER NECESSARY PARTIES TO THE PROJECT SHALL BE PRESENT AT THE PRE-CONSTRUCTION CONFERENCE.

SLOPES SHALL BE STABILIZED TO PREVENT EROSION. IN CASE EROSION OCCURS IN DITCHES, DITCH LINING IS TO BE PROVIDED AS REQUESTED AND SPECIFIED BY THE COUNTY.

ALL TYPE 2 CATCH BASINS OVER 4 FEET IN HEIGHT SHALL HAVE STANDARD STEPS.

WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL OVERLAY AND FEATHER NEW PAVEMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. APPLICATION OF A THIN PAINT COAT OF EMULSIFIED ASPHALT SHALL BE APPLIED TO INSURE PROPER BONDING.

THE COMPLETED SURFACE OF ALL COURSES SHALL BE OF UNIFORM TEXTURE, SMOOTH, UNIFORM AS TO CROWN AND GRADE, AND FREE FROM DEFECTS OF ALL KINDS. THE COMPLETED SURFACE OF THE WEARING COURSE SHALL NOT VARY MORE THAN 1/8" FROM THE LOWER EDGE OF A 10 FOOT STRAIGHT EDGE PLACED ON THE SURFACE PARALLEL TO THE CENTERLINE. THE TRAVERSE SLOPE OF THE COMPLETED SURFACE OF THE WEARING COURSE SHALL VARY NOT MORE THAN 1/4" INCH IN 10 FEET FROM THE RATE OF TRAVERSE SLOPE SHOWN ON THE PLANS.

MATERIALS SAMPLING AND TESTING SHALL BE AT A FREQUENCY AND MAGNITUDE AS SPECIFIED IN THE STANDARD SPECIFICATIONS OR DETERMINED BY THE COUNTY ENGINEER. IN THE CASE OF PLAT ROADS, TESTING AND SAMPLING SHALL BE PERFORMED BY A PRIVATE TESTING LABORATORY. CERTIFIED TEST REPORTS SHALL BE FURNISHED FOR ALL TESTS PERFORMED BY PRIVATE TESTING LABORATORIES.

ALL UTILITY WORK WITHIN EXISTING PAVEMENT REQUIRES A MINIMUM ROADWAY RECONSTRUCTION FROM THE CENTERLINE, TO INCLUDE GRINDING THE EXISTING PAVEMENT AND REPLACING IT WITH A MINIMUM 0.17' PAVEMENT.

Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

CITY OF NAPAVINE PERMITS

JUN 08 2022

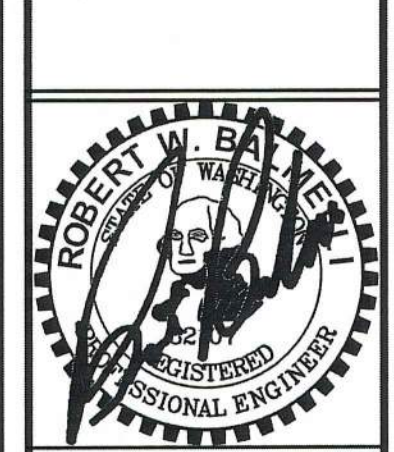
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NO.	DATE	REVISION
1	6.6.22	1st CITY REVIEW COMMENTS

DESIGNED BY: ZRW	DRAWN BY: ZRW	CHECKED BY: RWB	DATE: 5/24/2022	SCALE: NO SCALE
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NEWAUKUM ST. TRIPLEX  
CITY OF NAPAVINE, WA

HORIZONTAL CONTROL DETAILS

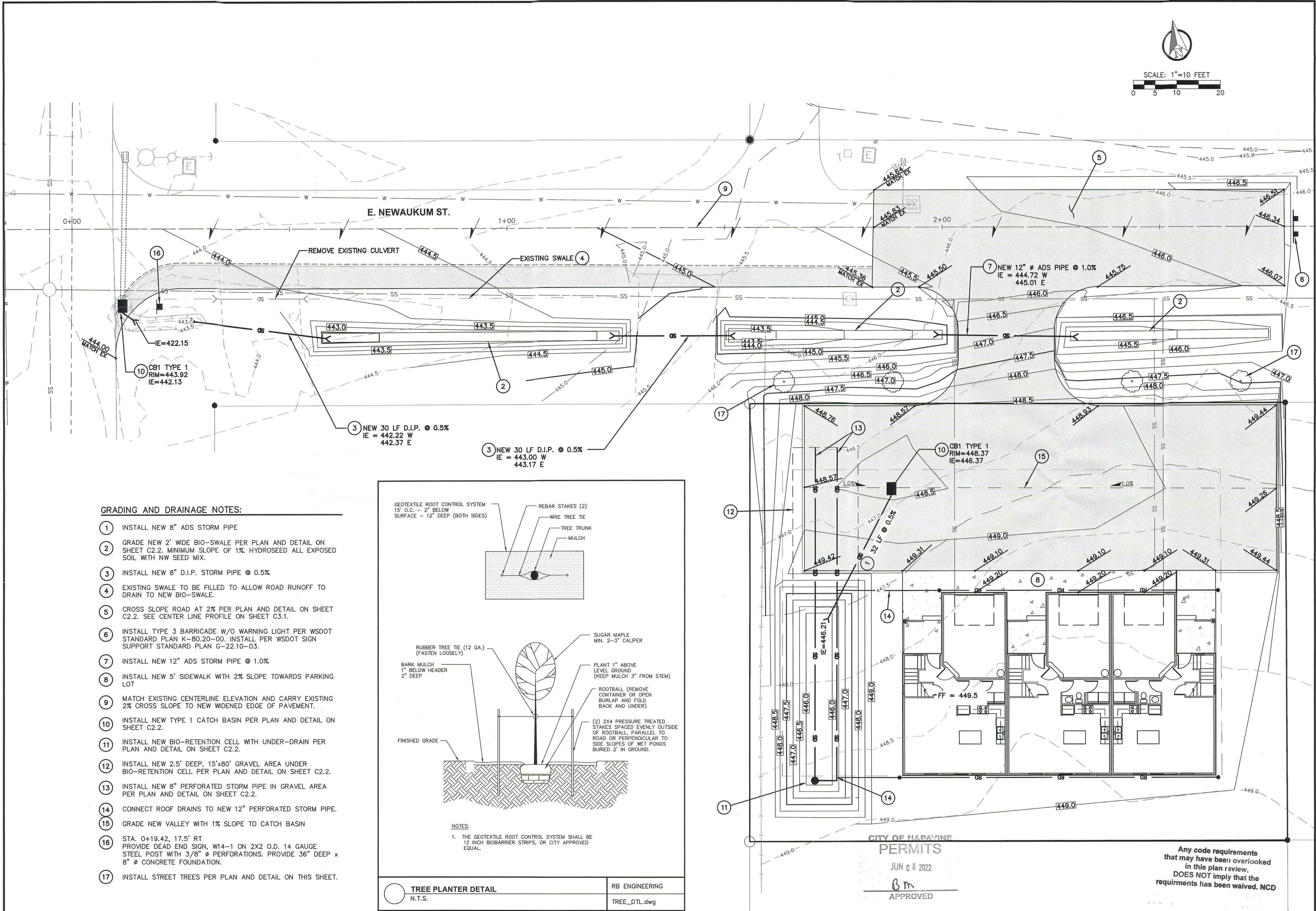


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EMAIL: info@rbengineers.com  
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JOB NUMBER: 21068  
DRAWING NAME: 21068\_HCDT  
**C1.2**  
3 OF 11

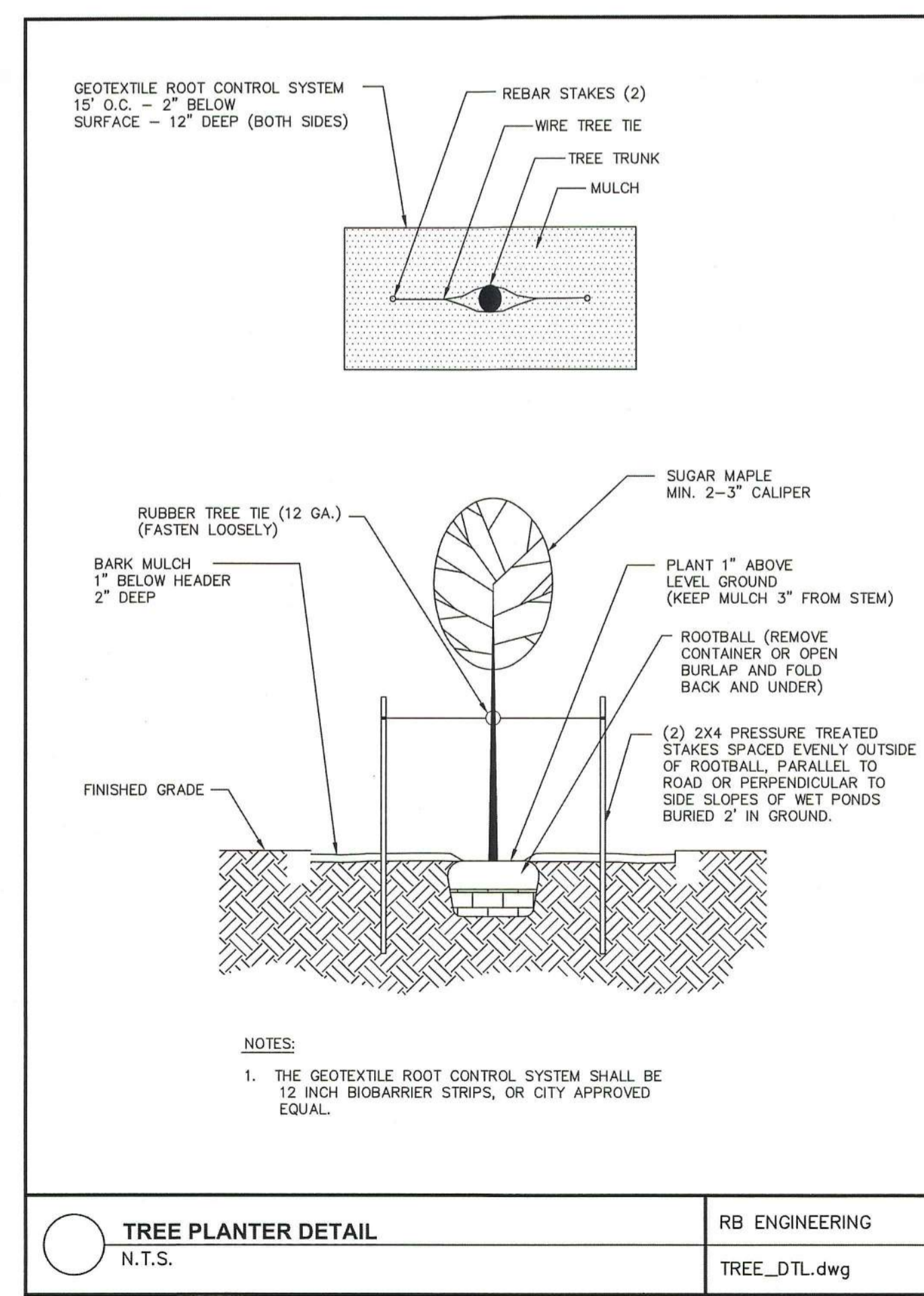


SCALE: 1"=10 FEET  
0 5 10 20

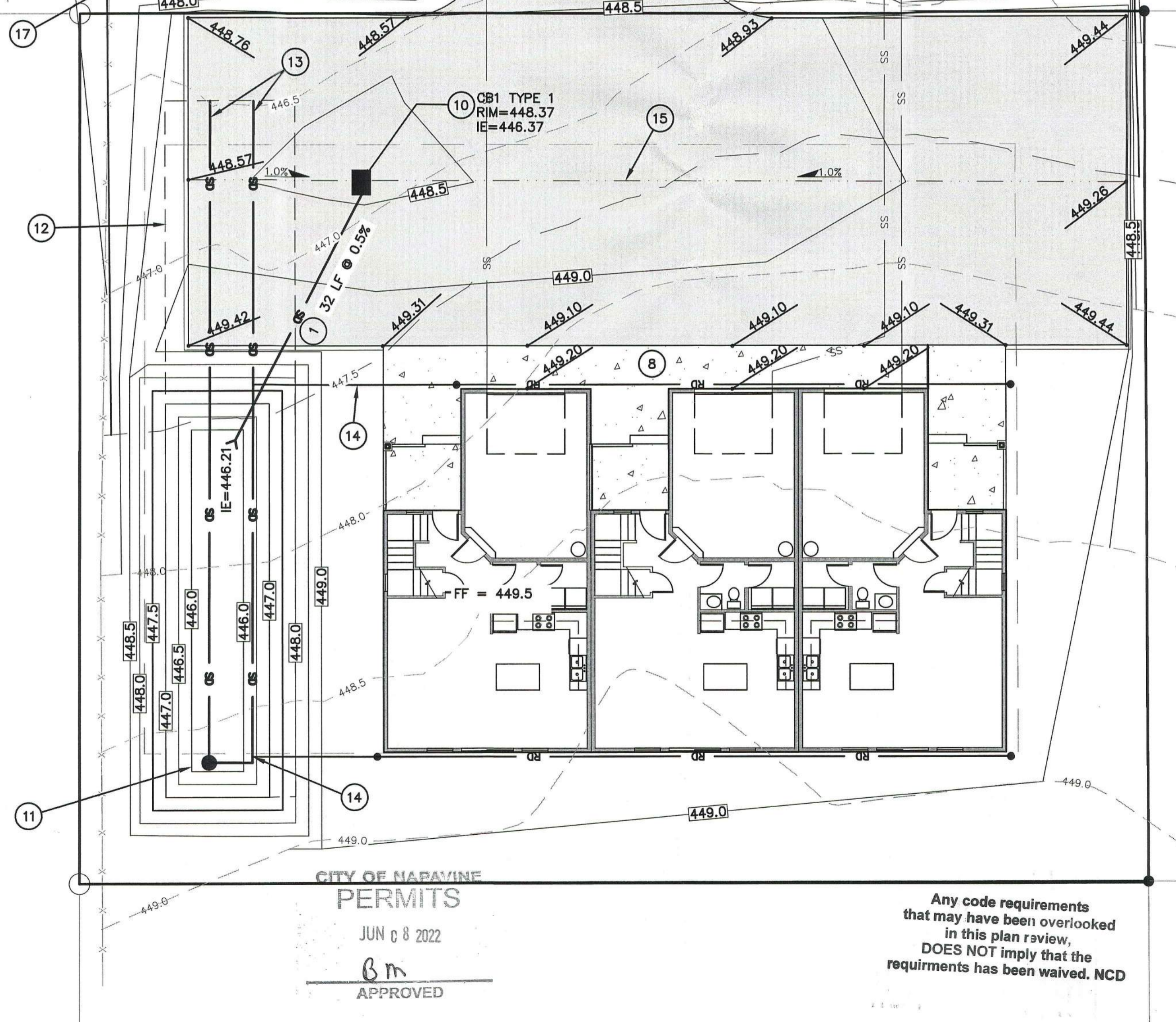


**GRADING AND DRAINAGE NOTES:**

1. INSTALL NEW 8" ADS STORM PIPE
2. GRADE NEW 2" WIDE BIO-SWALE PER PLAN AND DETAIL ON SHEET C2.2. MINIMUM SLOPE OF 1%. HYDROSEED ALL EXPOSED SOIL WITH NW SEED MIX.
3. INSTALL NEW 8" D.I.P. STORM PIPE @ 0.5%.
4. EXISTING SWALE TO BE FILLED TO ALLOW ROAD RUNOFF TO DRAIN TO NEW BIO-SWALE.
5. CROSS SLOPE ROAD AT 2% PER PLAN AND DETAIL ON SHEET C2.2. SEE CENTER LINE PROFILE ON SHEET C3.1.
6. INSTALL TYPE 3 BARRICADE W/O WARNING LIGHT PER WSDOT STANDARD PLAN K-80.20-00. INSTALL PER WSDOT SIGN SUPPORT STANDARD PLAN G-22.10-03.
7. INSTALL NEW 12" ADS STORM PIPE @ 1.0%.
8. INSTALL NEW 5' SIDEWALK WITH 2% SLOPE TOWARDS PARKING LOT
9. MATCH EXISTING CENTERLINE ELEVATION AND CARRY EXISTING 2% CROSS SLOPE TO NEW WIDENED EDGE OF PAVEMENT.
10. INSTALL NEW TYPE 1 CATCH BASIN PER PLAN AND DETAIL ON SHEET C2.2.
11. INSTALL NEW BIO-RETENTION CELL WITH UNDER-DRAIN PER PLAN AND DETAIL ON SHEET C2.2.
12. INSTALL NEW 2.5' DEEP, 15'x80' GRAVEL AREA UNDER BIO-RETENTION CELL PER PLAN AND DETAIL ON SHEET C2.2.
13. INSTALL NEW 8" PERFORATED STORM PIPE IN GRAVEL AREA PER PLAN AND DETAIL ON SHEET C2.2.
14. CONNECT ROOF DRAINS TO NEW 12" PERFORATED STORM PIPE.
15. GRADE NEW VALLEY WITH 1% SLOPE TO CATCH BASIN
16. STA. 0+19.42, 17.5' RT PROVIDE DEAD END SIGN, W14-1 ON 2X2 O.D. 14 GAUGE STEEL POST WITH 3/8" Ø PERFORATIONS. PROVIDE 36" DEEP x 8" Ø CONCRETE FOUNDATION.
17. INSTALL STREET TREES PER PLAN AND DETAIL ON THIS SHEET.



**TREE PLANTER DETAIL**  
N.T.S. RB ENGINEERING TREE\_DTL.dwg



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GRADING AND DRAINAGE PLAN



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4 OF 11

DRAWN BY: BEN LUBELL

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INCHES DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CLAY PIPE (STD. SPEC. SECT. 5-69.23)	12"
SOLID WALL PVC (STD. SPEC. SECT. 5-68.131.9)	15"
PROFILE WALL PVC (STD. SPEC. SECT. 5-68.132.9)	15"

NOTE: \* CORRUGATED POLYETHYLENE STORM SEWER PIPE

PIPE ALLOWANCES

FRAME AND VANED GRATE

RECTANGULAR ADJUSTMENT SECTION

PRECAST BASE SECTION

ALTERNATIVE PRECAST BASE SECTION

ONE #3 BAR FOR 2" (IN) HEIGHT INCREMENT (SPACED EQUALLY)

#3 BAR EACH CORNER

#3 BAR HOOP

#3 BAR EACH VANE

#3 BAR (TYP)

#3 BAR HOOP 1" (IN) MIN

#3 BAR HOOP

(SEE NOTE 1)

BRAND: Roark, Steves & Associates, Inc. (Professional Engineer)

APPROVED FOR PUBLICATION

Roark, Steves & Associates, Inc.

Washington State Department of Transportation

DRAWN BY: LISA COTYARD

WARNING LIGHT ATTACHMENT DETAIL

ELEVATION

SIDE

ISOMETRIC VIEW

ATTACHMENT DETAIL (A)

ATTACHMENT DETAIL (B)

ATTACHMENT DETAIL (C)

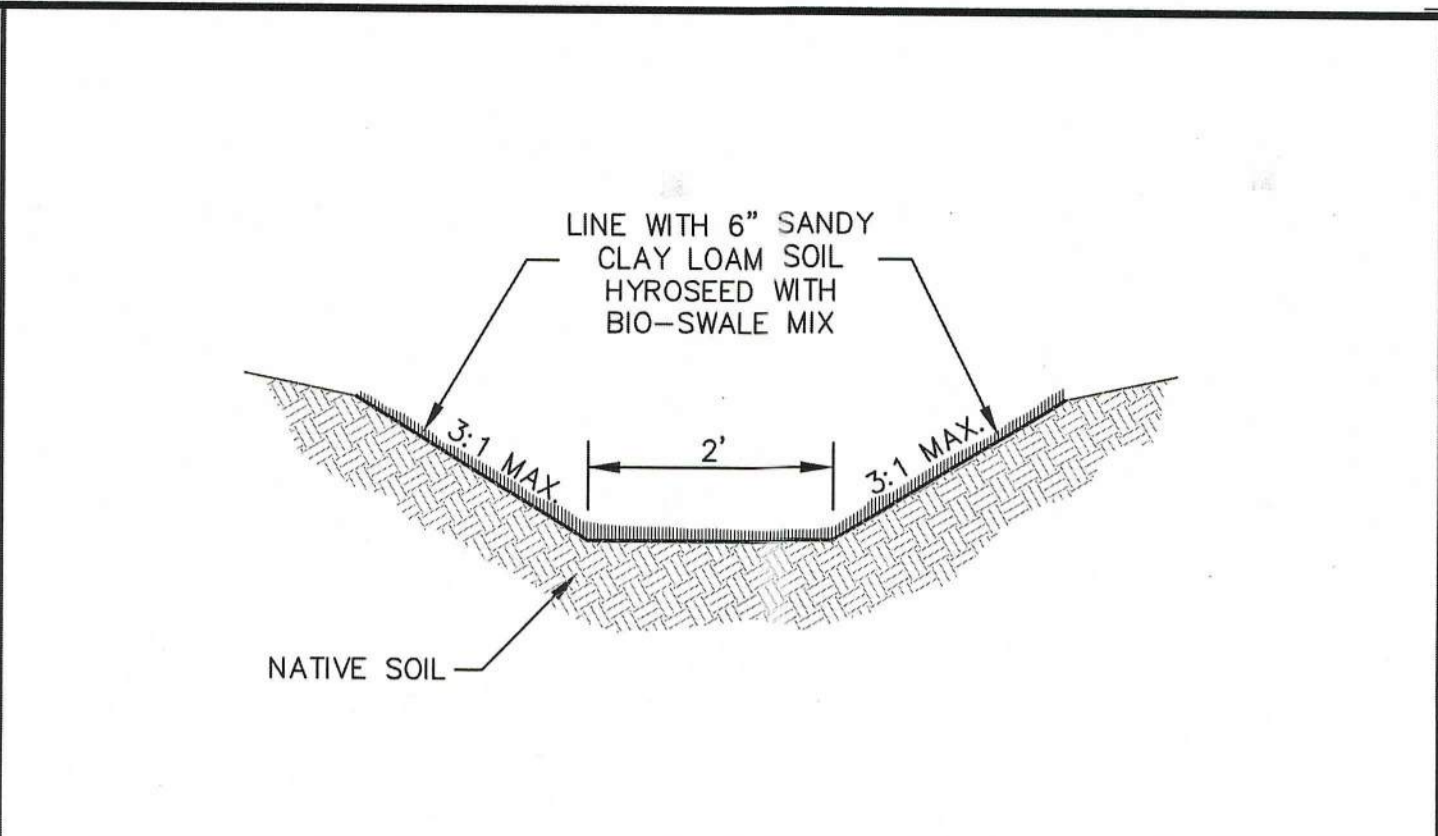
TYPE 3 BARRICADE

STANDARD PLAN K-60.20-00

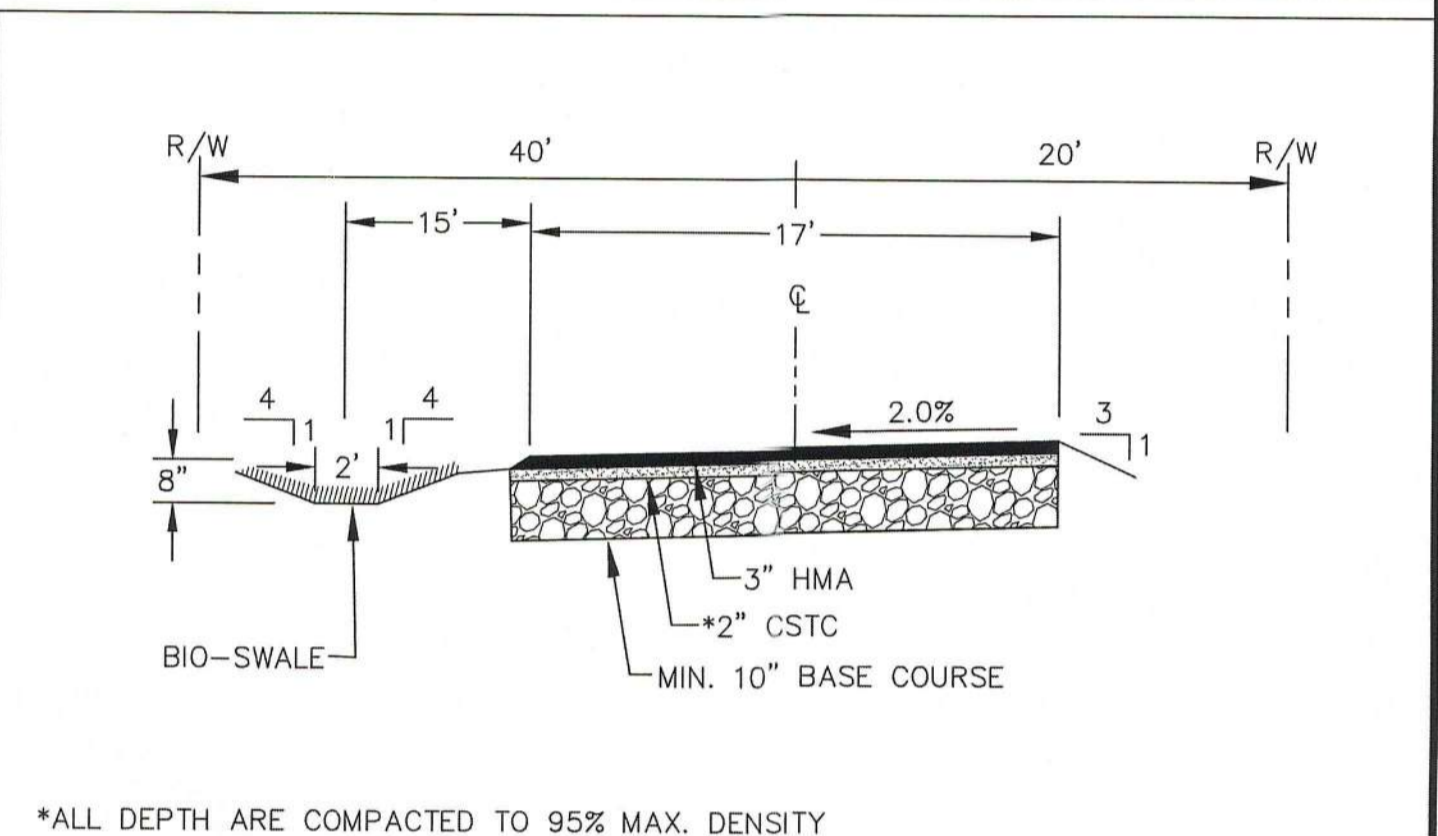
NOTES:

- All fasteners may be zinc plated, galvanized or stainless steel. All steel angles and tubular steel shall be hot-dipped, high carbon steel, painted or galvanized.
- Install one lightweight Type A Low-Intensity Flashing warning light on the traffic side of the barricade. Install two Type A Low-Intensity Flashing warning lights per barricade when the barricades are used to close a roadway. Adjust the light to the barricade according to the light manufacturer's recommendations or use the details shown on this plan.
- Stripes on barricade rails shall be alternating orange and white retroreflective stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass).
- The Type 3 barricade design shown on this plan meets the crash test requirements of NCHRP 350. Alternative designs may be approved if they conform to the NCHRP 350 crash test criteria and the MUTCD.
- When a sign is mounted on the barricade, it shall be securely bolted to at least two plywood panels. The top of the sign shall not be higher than the top panel of the barricade.
- When sandbags are used in freezing weather, Urea fertilizer shall be mixed with the sand in a quantity to prevent the sand from freezing.

BRAND: Roark, Steves & Associates, Inc. (Professional Engineer)



BIOFILTRATION SWALE DETAIL		RB ENGINEERING
N.T.S.		BIOFIL_SWALE.1.dwg



CROSS-SLOPED ROAD SECTION W/ SWALE		RB ENGINEERING
N.T.S.		ROAD_XSEC_CS.dwg

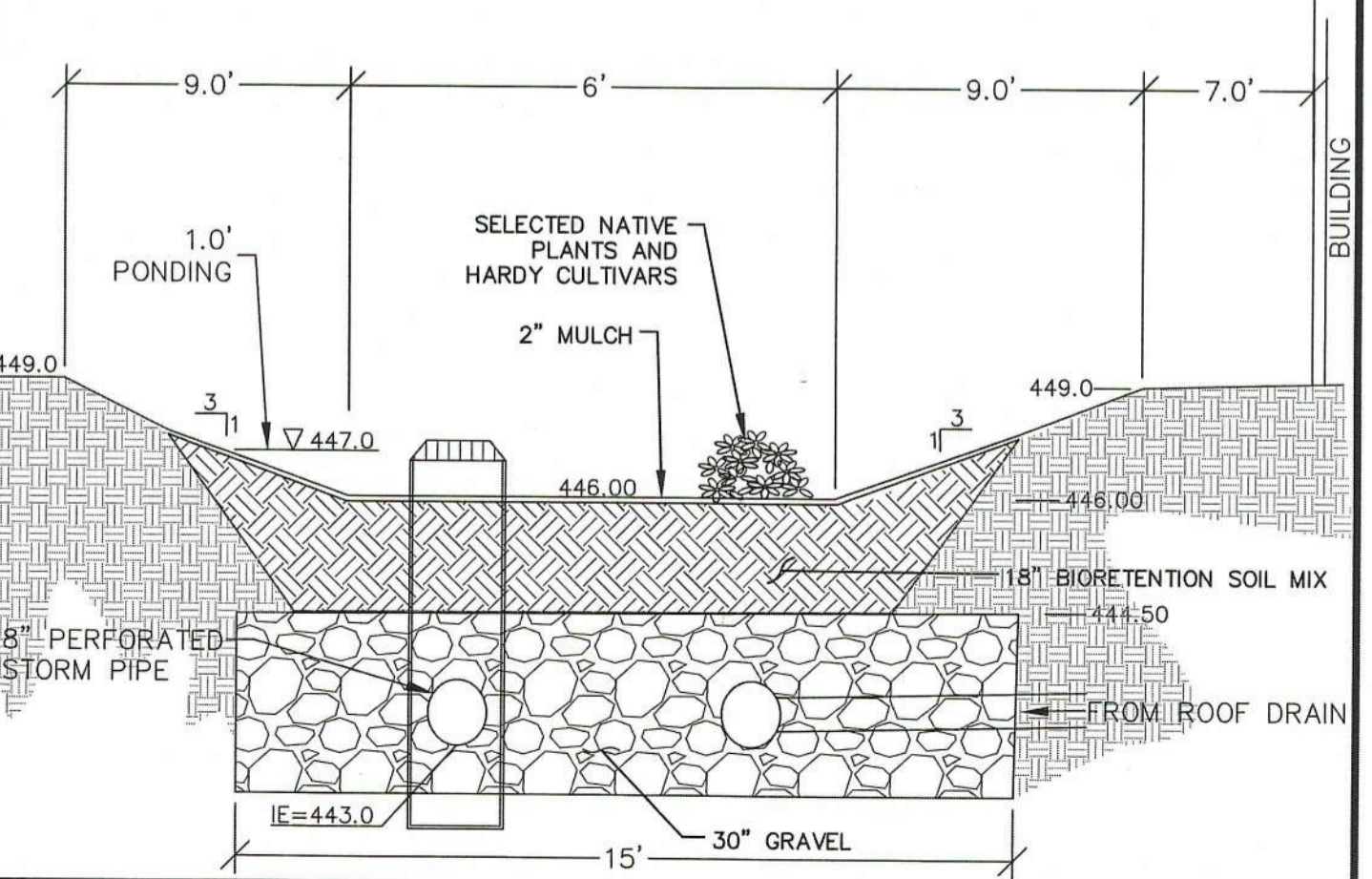
**BIORETENTION SOIL MIX:**

CONTRACTOR TO PROVIDE SUBMITTAL OF BIO-RETENTION GRADATION SOIL MIX TO CITY AND ENGINEER PRIOR TO CONSTRUCTION.

SOIL MIX:

- 60% TO 65% GRAVELLY SAND AND 35% TO 40% COMPOST (SEE SPECIFICATION BELOW).
- GRAVELLY SAND GRADATION PER ASTM D 422 LESS THAN 5%
 

SIEVE SIZE	PERCENT PASSING
US NO. 0.375	100
US NO. 4	100
US NO. 10	75-90
US NO. 40	24-40
US NO. 100	4-10
US NO. 200	2-5
- MAXIMUM CLAY CONTENT SHOULD BE LESS THAN 5%
- SOIL MIXTURE SHOULD BE UNIFORM, FREE OF STONES, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES
- ON-SITE SOIL MIXING OR PLACEMENT NOT ALLOWED IF SOIL IS SATURATED OR SUBJECTED TO WATER WITHIN 48 HOURS
- COVER AND STORE SOIL ACCORDINGLY TO PREVENT WETTING OR SATURATION
- TEST SOIL FOR FERTILITY AND MICRONUTRIENTS AND, IF NECESSARY, AMEN MIXTURE TO CREATE OPTIMUM CONDITIONS FOR PLANT ESTABLISHMENT AND EARLY GROWTH AT RATES RECOMMENDED BY AN INDEPENDENT LABORATORY SOIL TEST.
- ORGANIC CONTENT OF THE SOIL MIXTURE SHOULD BE 5% TO 8%
- CATION EXCHANGE CAPACITY (C.E.C) MUST BE LESS THAN 5 MILLIEQUIVALENTS PER 100 GRAMS OF DRY SOIL.



BIORETENTION CELL TRAPEZOIDAL		RB ENGINEERING
N.T.S.		BIORTN_CELL_CURB.dwg

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CITY OF NAPAVINE PERMITS

JUN 08 2022

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DRAWN BY: ZRW	CHECKED BY: RMB
DATE: 5/24/2022	SCALE: NO. SCALE

NEWAUKUM ST. TRIPLEX

CITY OF NAPAVINE, WA.

DRAINAGE DETAILS		RB ENGINEERING
		ROAD_XSEC_CS.dwg

ROBERT BAILEY  
REGISTERED PROFESSIONAL ENGINEER

**RB Engineering**

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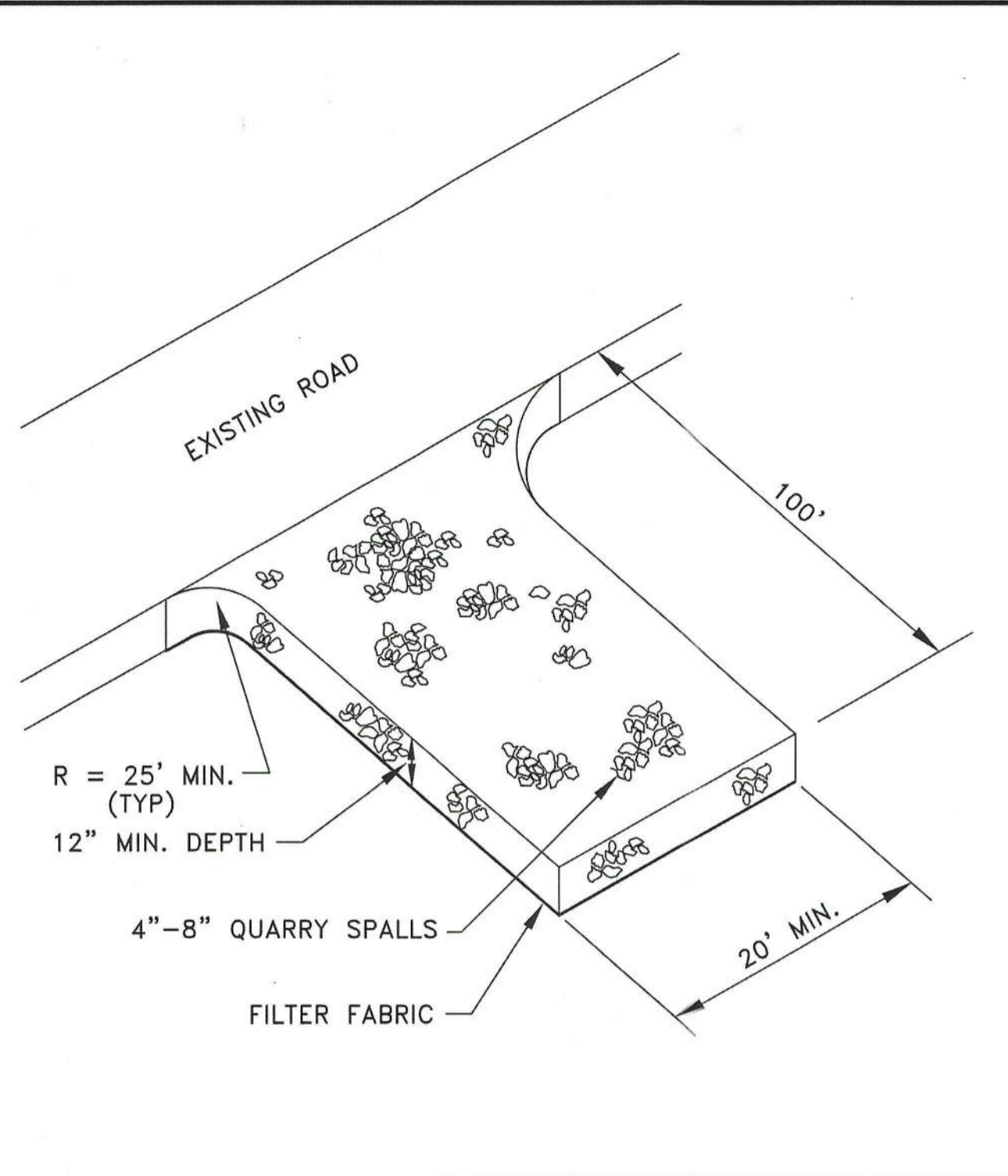
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DRAWING NAME: 21068_DRD
<b>C2.2</b>
5 OF 11



City of Napavine  
CONSTRUCTION  
ENTRANCE

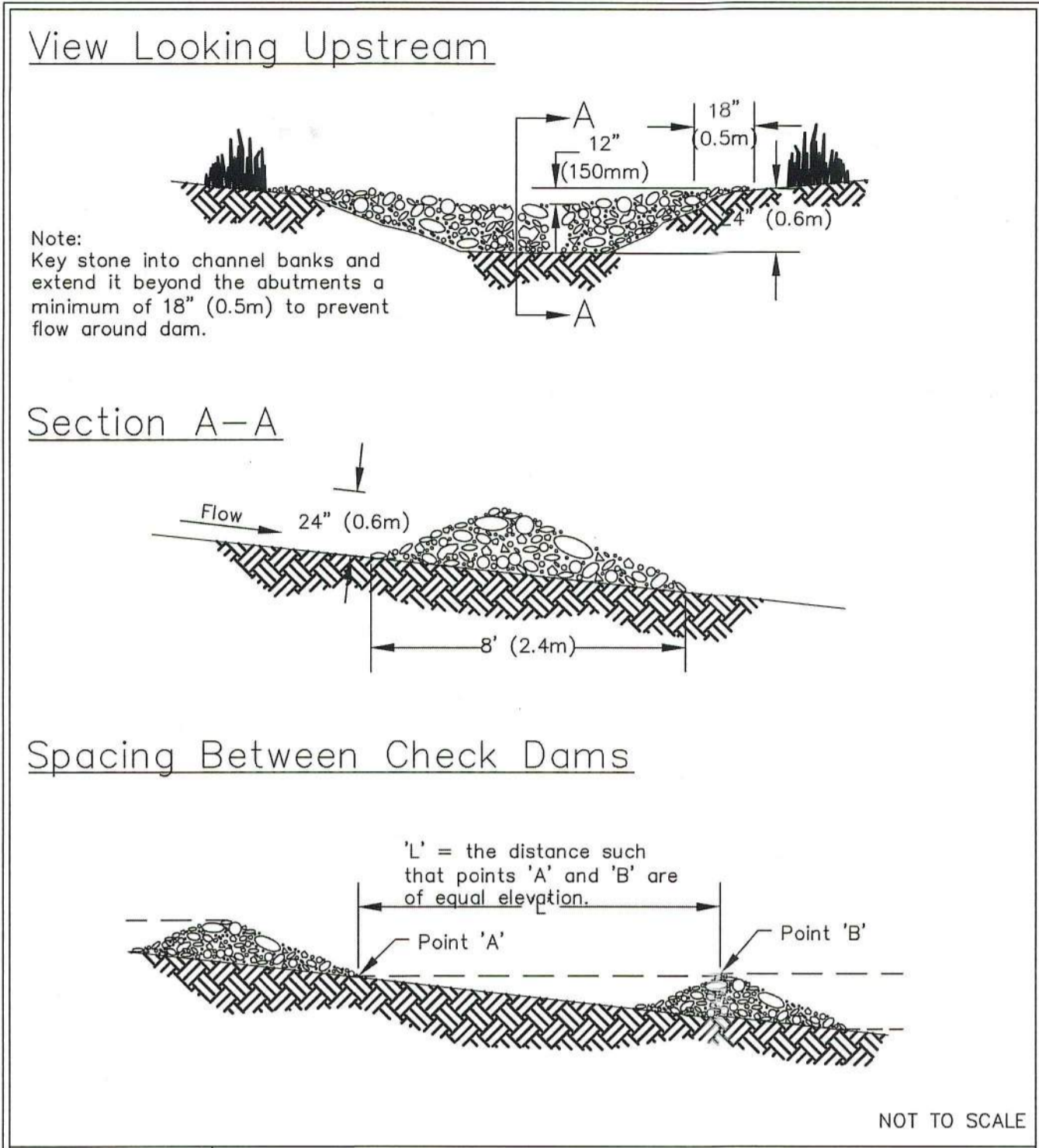
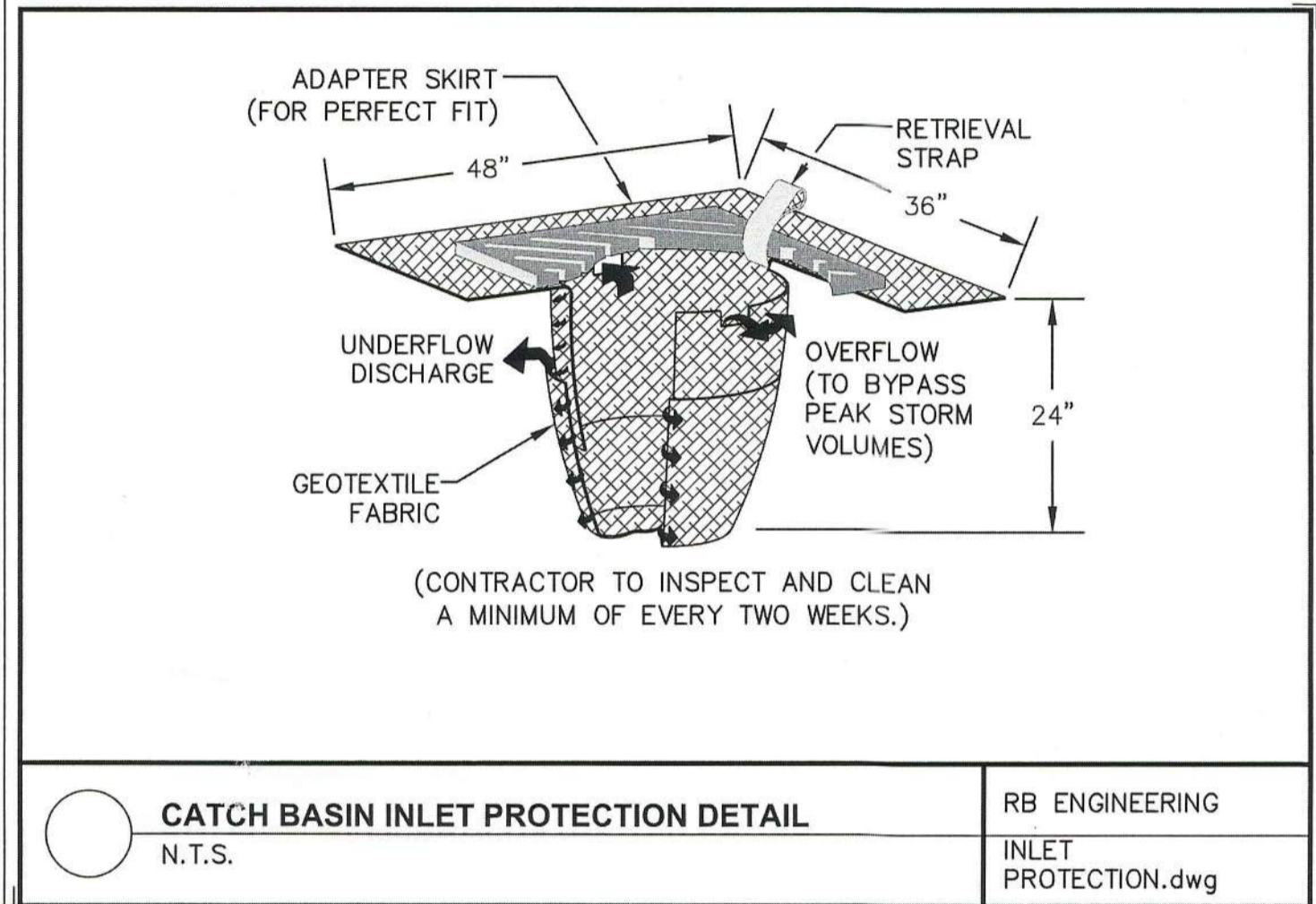


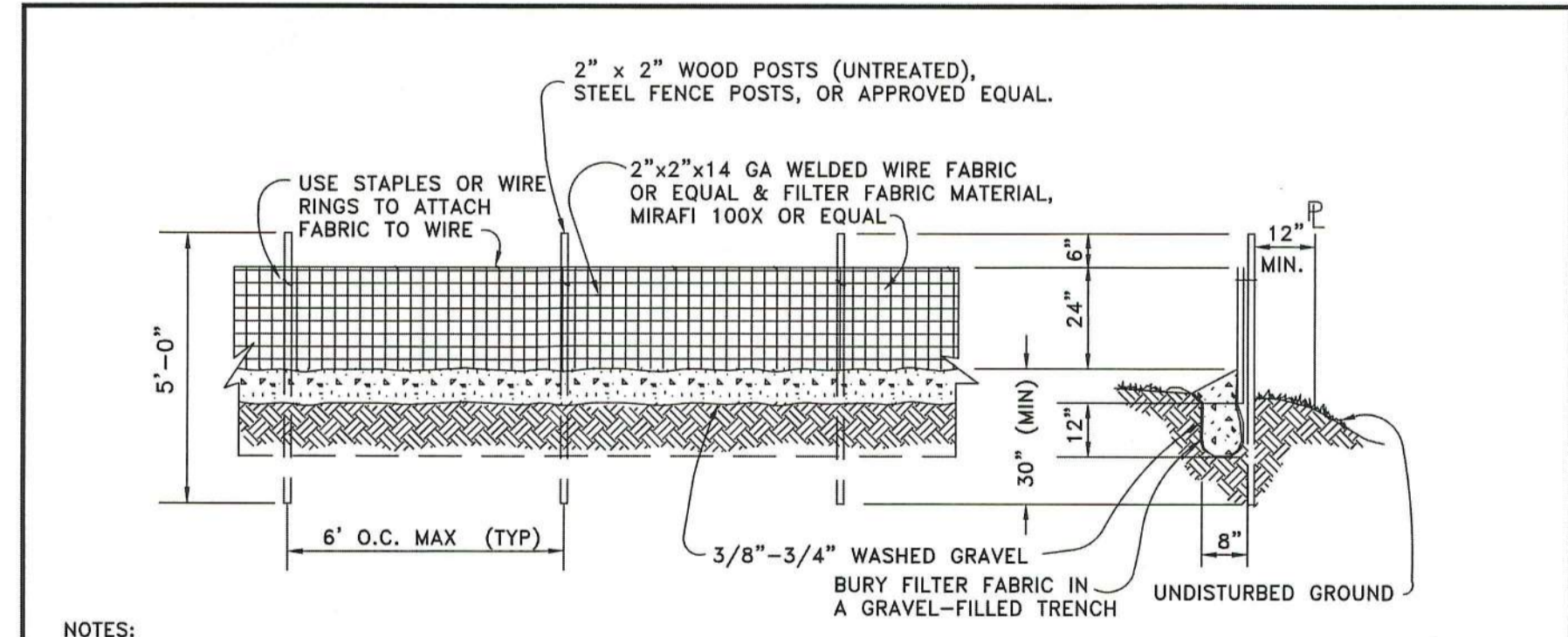
Figure II-4.2.7  
Rock Check Dam  
Revised July 2015



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CATCH BASIN INLET PROTECTION DETAIL  
N.T.S.  
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INLET PROTECTION.dwg



- NOTES:
1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED @ BOTH ENDS.
  2. A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1-INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE WILL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES & SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
  3. WHEN EXTRA-STRENGTH FILTER FABRIC & 4-FOOT MAXIMUM POST SPACING IS USED, THE WIRE MESH FENCE MAY BE ELIMINATED. IN SUCH CASES, THE FILTER FABRIC WILL BE STAPLED OR WIRED DIRECTLY TO THE POSTS W/ ALL OTHER PROVISIONS STILL APPLYING.
  4. SILT FENCE SHALL NOT BE MOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
  5. SILT FENCING SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL & AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

City of Napavine  
TEMPORARY  
SILT FENCE

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CITY OF NAPAVINE  
PERMITS  
JUN 08 2022  
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NEWAUKUM ST.  
TRIPLEX  
CITY OF NAPAVINE, WA.

DRAINAGE AND T.E.S.C. DETAILS



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**C2.3**  
6 OF 11



**WATER CONSTRUCTION NOTES:**

- 1 CONTRACTOR TO MAKE CONNECTION TO EXISTING 8-INCH WATER MAIN AT LOCATION SHOWN PER PLAN AND PROFILE. DETAIL ON SHEET C2.2.
- 2 INSTALL NEW 8" C900 DR18 WATER MAIN PER PLAN AND PROFILE.
- 3 INSTALL 3 NEW 3/4" x 3/4" WATER METER SETTERS PER CITY STANDARD DETAILS ON SHEET C3.2.
- 4 REMOVE EXISTING TEMPORARY BLOWOFF AND RE-INSTALL AT NEW LOCATION PER PLAN AND PROFILE. SEE DETAIL ON SHEET C3.2.
- 5 INSTALL 1" METER AND 1" DCV FOR IRRIGATION SERVICE IN PLASTIC ACCESS BOX PER PLAN AND DETAILS ON SHEET C3.3.

**SEWER CONSTRUCTION NOTES:**

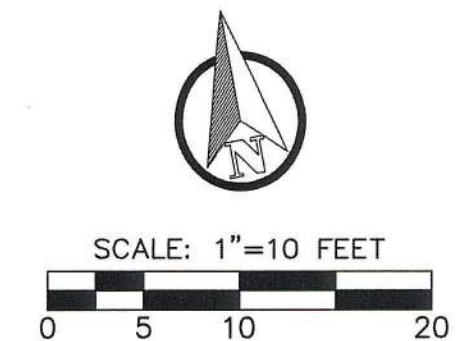
- 1 CONTRACTOR TO MAKE CONNECTION TO EXISTING 8-INCH SEWER LINE.
- 2 INSTALL NEW SDR 35 SEWER MAIN PER PLAN AND PROFILE.
- 3 INSTALL NEW 6" CLEANOUT PER PLAN AND DETAIL ON SHEET C3.3. (TYP. OF 4)
- 4 INSTALL END OF LINE CLEANOUT PER PLAN PROFILE. SEE DETAIL ON SHEET C3.3.
- 5 INSTALL BUILDING SEWER CLEANOUT PER CURRENT PLUMBING CODE (TYP. OF 4).

**STREET LIGHTING NOTES:**

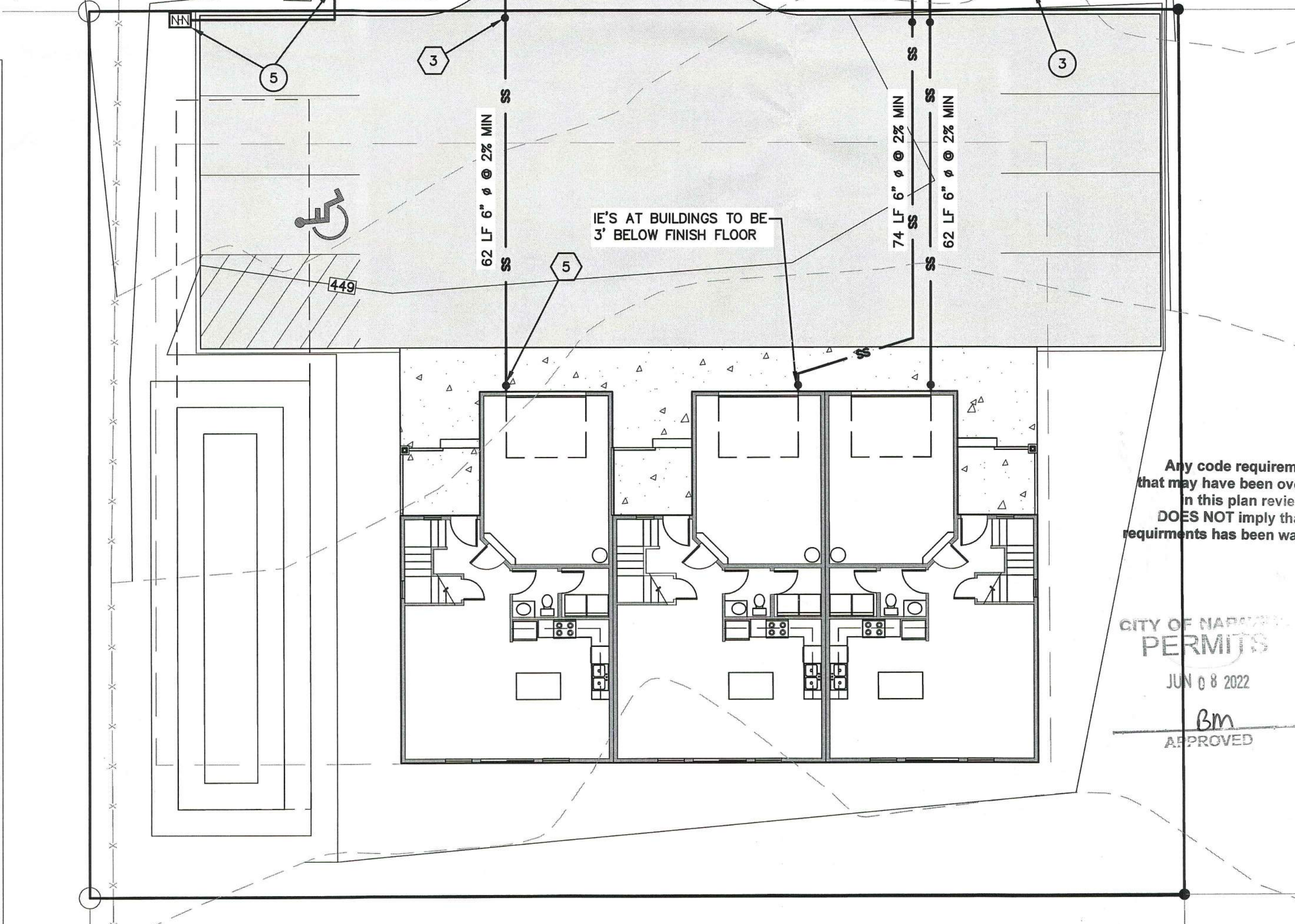
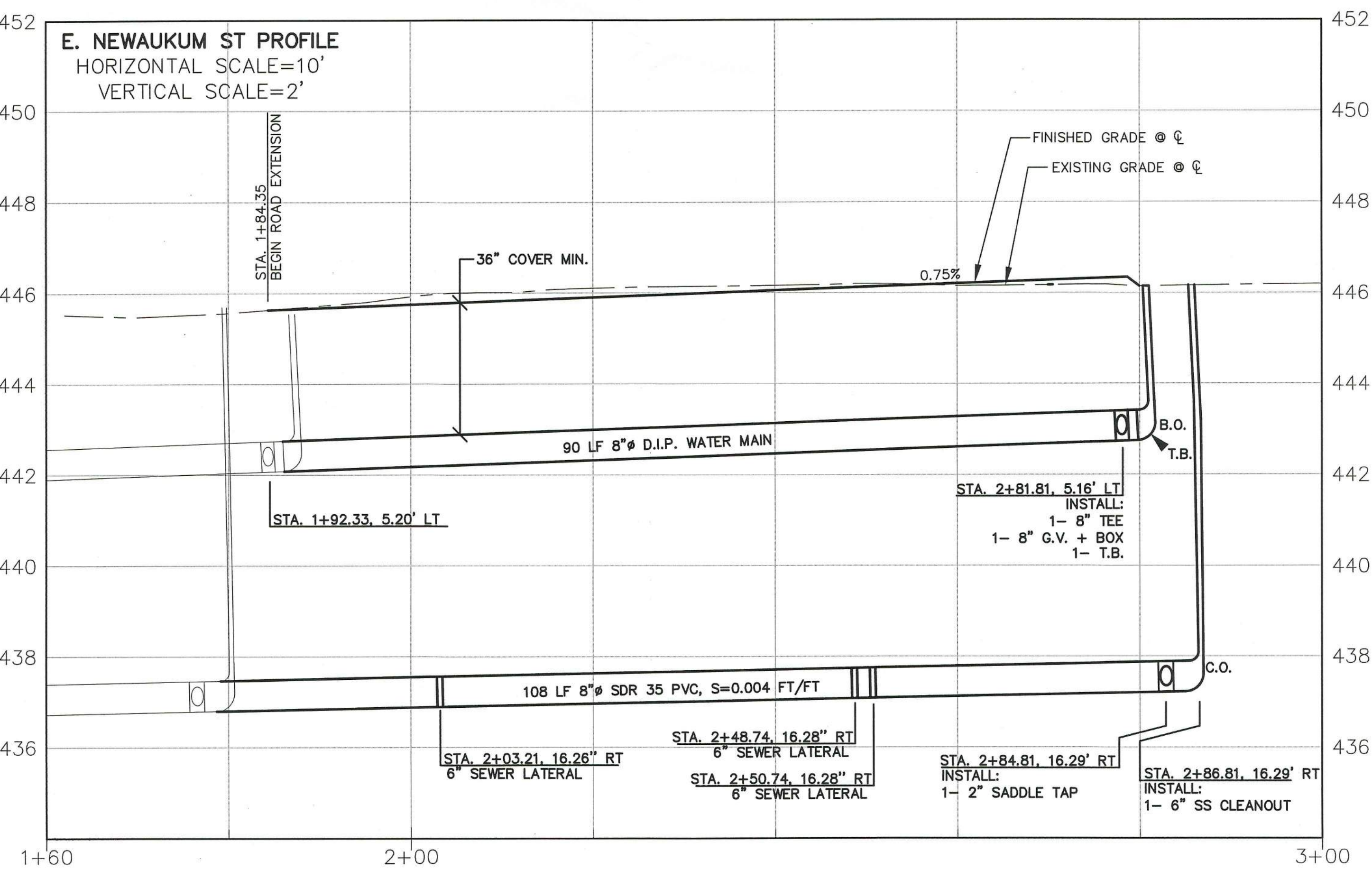
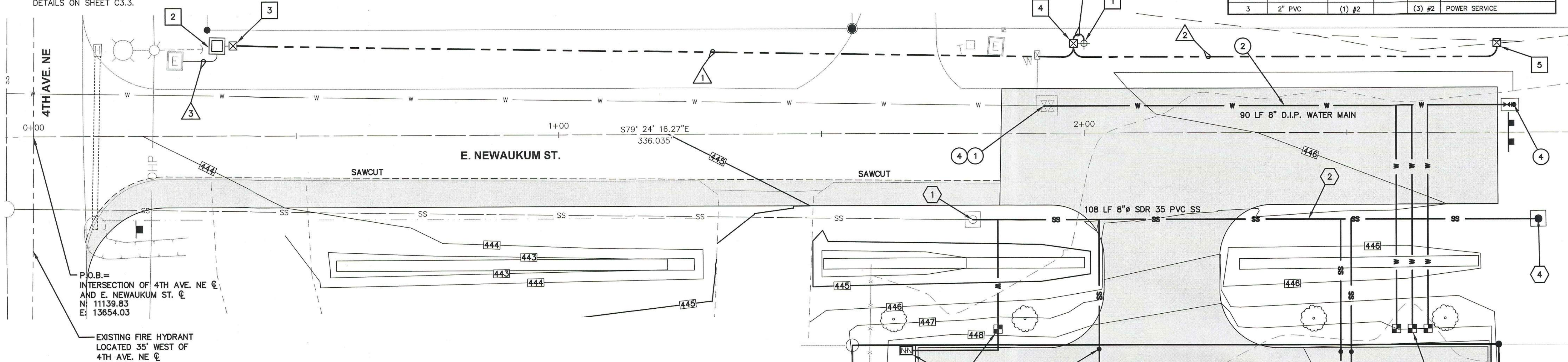
- 1 STA. 2+00, 17' LT INSTALL LCKM2, 4000K, TYPE II DISTRIBUTION, 120-277V LED LUMINAIRE ON 11' POLE PER PLAN AND DETAIL ON SHEET C3.4. PROVIDE SUBMITTAL PRIOR TO ORDERING. CONTACT TRAVERS ELECTRIC FOR SPECIFICATIONS.
- 2 STA 0+35, 17' LT INSTALL NEW STREET LIGHT SERVICE DISCONNECT PER PLAN AND DETAIL ON SHEET C3.4.
- 3 STA 0+38, 17' LT INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-03.
- 4 STA 1+98, 17' LT INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-03.
- 5 STA 2+78, 17' LT INSTALL TYPE 1 JUNCTION BOX PER WSDOT STANDARD PLAN J-40.10-03.

**LEGEND**

- ⊗ WIRE NOTE
- ⊗ TYPE 1 JUNCTION BOX, J-40.10-03
- ⊕ NAPAVINE LIGHT STANDARD



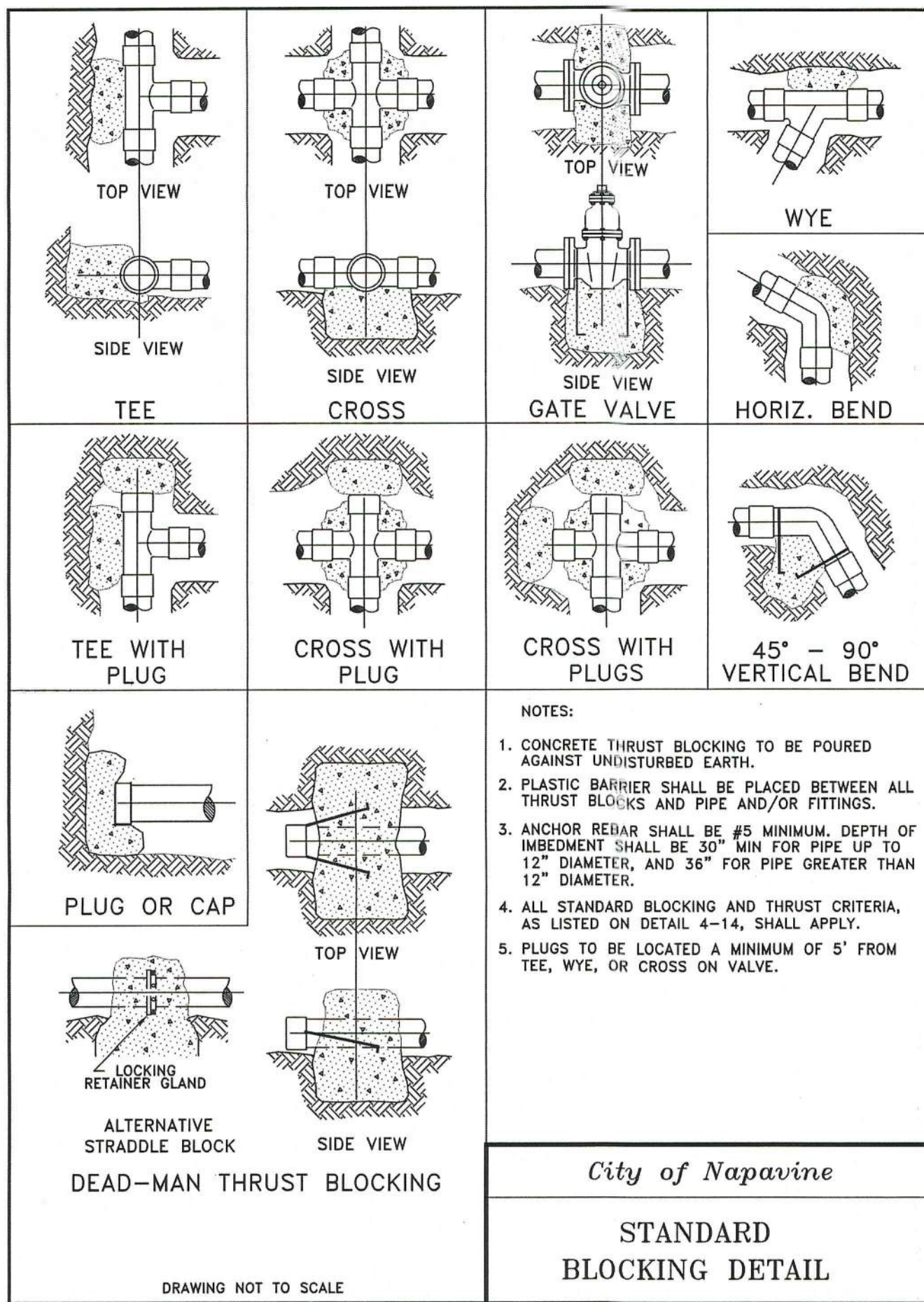
WIRE SCHEDULE					
RUN NO.	CONDUIT SIZE	GROUND	ILLUM.	POWER	COMMENTS
1	2" PVC	(1) #8	(2) #8		ILLUMINATION
2	2" PVC				PULL STRING
3	2" PVC	(1) #2		(3) #2	POWER SERVICE



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CITY OF NAPAVINE PERMITS  
JUN 08 2022  
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<p>DESIGNED BY: ZRW DRAWN BY: ZRW CHECKED BY: RWB DATE: 5/24/2022 SCALE: 1" = 10'</p>	<p>REVISION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>1st CITY REVIEW COMMENTS</th> </tr> <tr> <td>1</td> <td>6.6.22</td> <td></td> </tr> </table>	NO.	DATE	1st CITY REVIEW COMMENTS	1	6.6.22		<p>NEWAUKUM ST. TRIPLEX</p> <p>UTILITY PLAN AND PROFILE</p> <p>CITY OF NAPAVINE, WA.</p>
NO.	DATE	1st CITY REVIEW COMMENTS						
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		<p><b>RB Engineering</b> DESIGN + PERMIT + MANAGE</p> <p>P.O. Box 923 OEHALS, WA 98532 OFF: (509) 740-8819 EMAIL: info@rbengineers.com</p>						
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**THRUST LOADS**

THRUST AT FITTINGS IN POUNDS AT 200 POUNDS PER SQUARE INCH OF WATER PRESSURE

PIPE DIAMETER	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END OR TEE
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300

**NOTES:**

- BLOCKING SHALL BE CEMENT CONCRETE CLASS "B" POURED IN PLACE AGAINST UNDISTURBED EARTH. FITTINGS & PIPE SHALL BE ISOLATED FROM CONCRETE THRUST BLOCK WITH PLASTIC OR SIMILAR MATERIAL.
- TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (S.F.):  
EXAMPLE : 12" - 90° BEND IN SAND AND GRAVEL  
32,000 LBS ÷ 3000 LB/S.F. = 10.7 S.F. OF AREA
- AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZE, PRESSURES AND SOIL CONDITIONS.
- BLOCKING SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

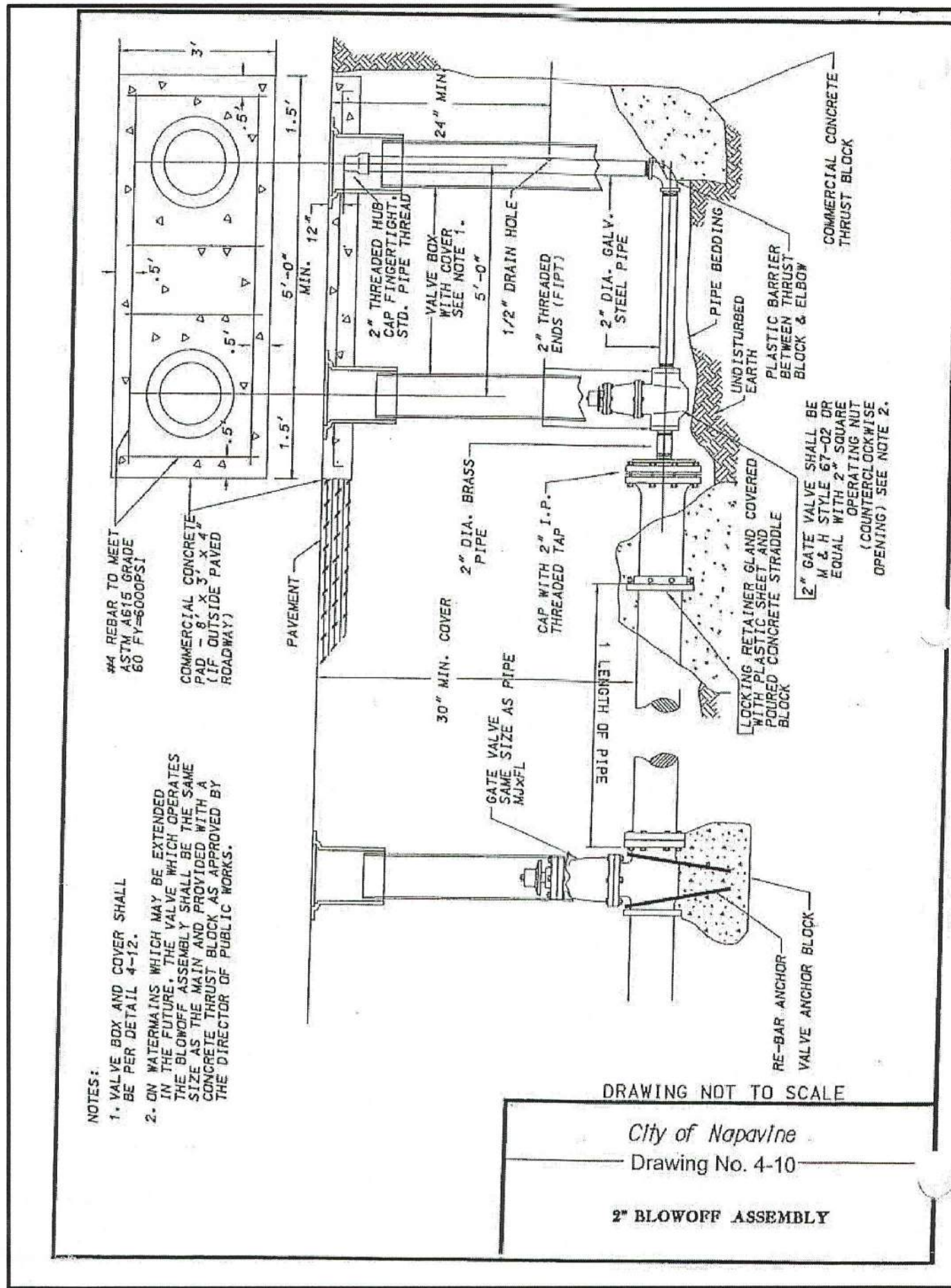
**SAFE SOIL BEARING LOADS**

FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET

SOIL	POUNDS PER SQUARE FOOT
MUCK, PEAT	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

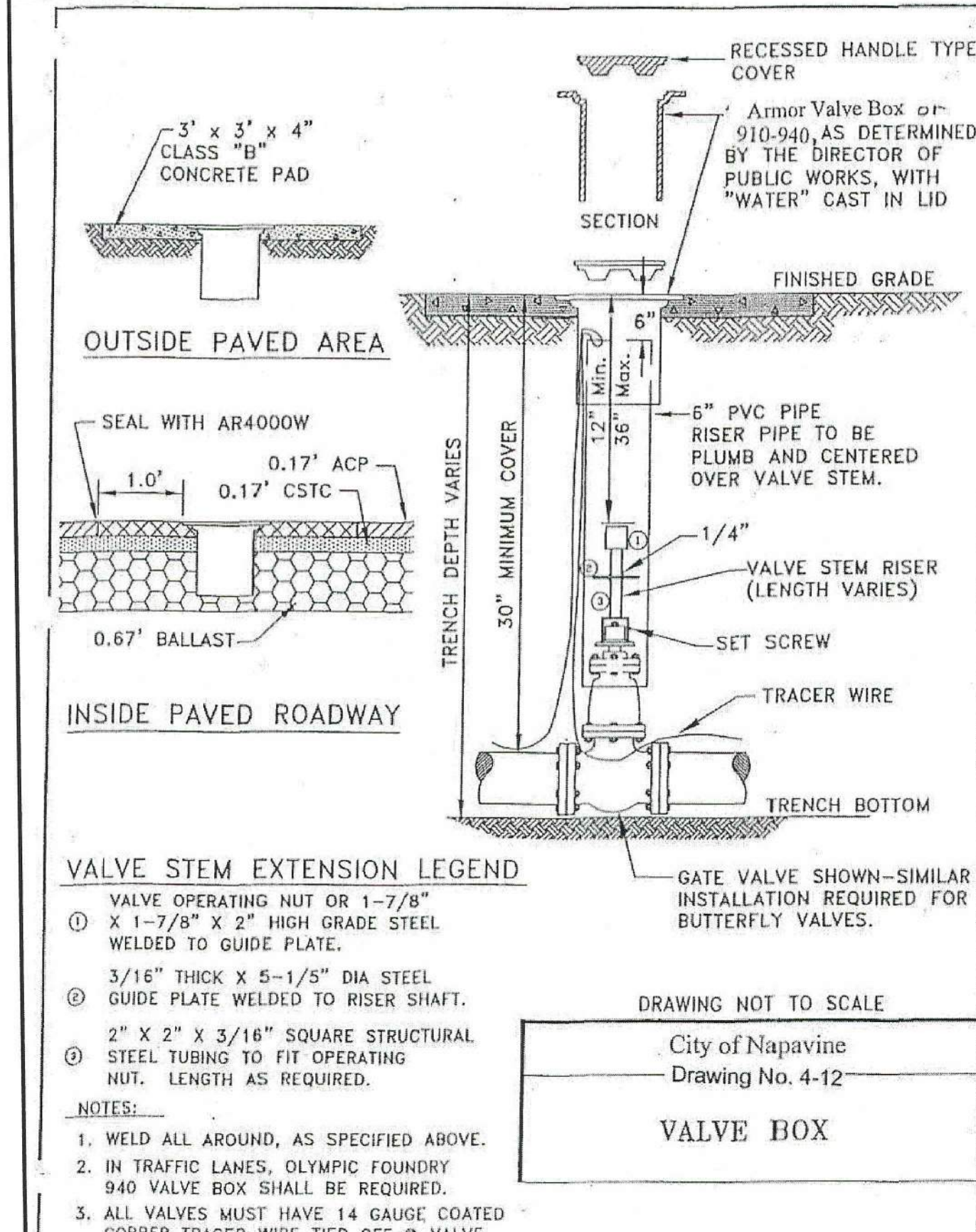
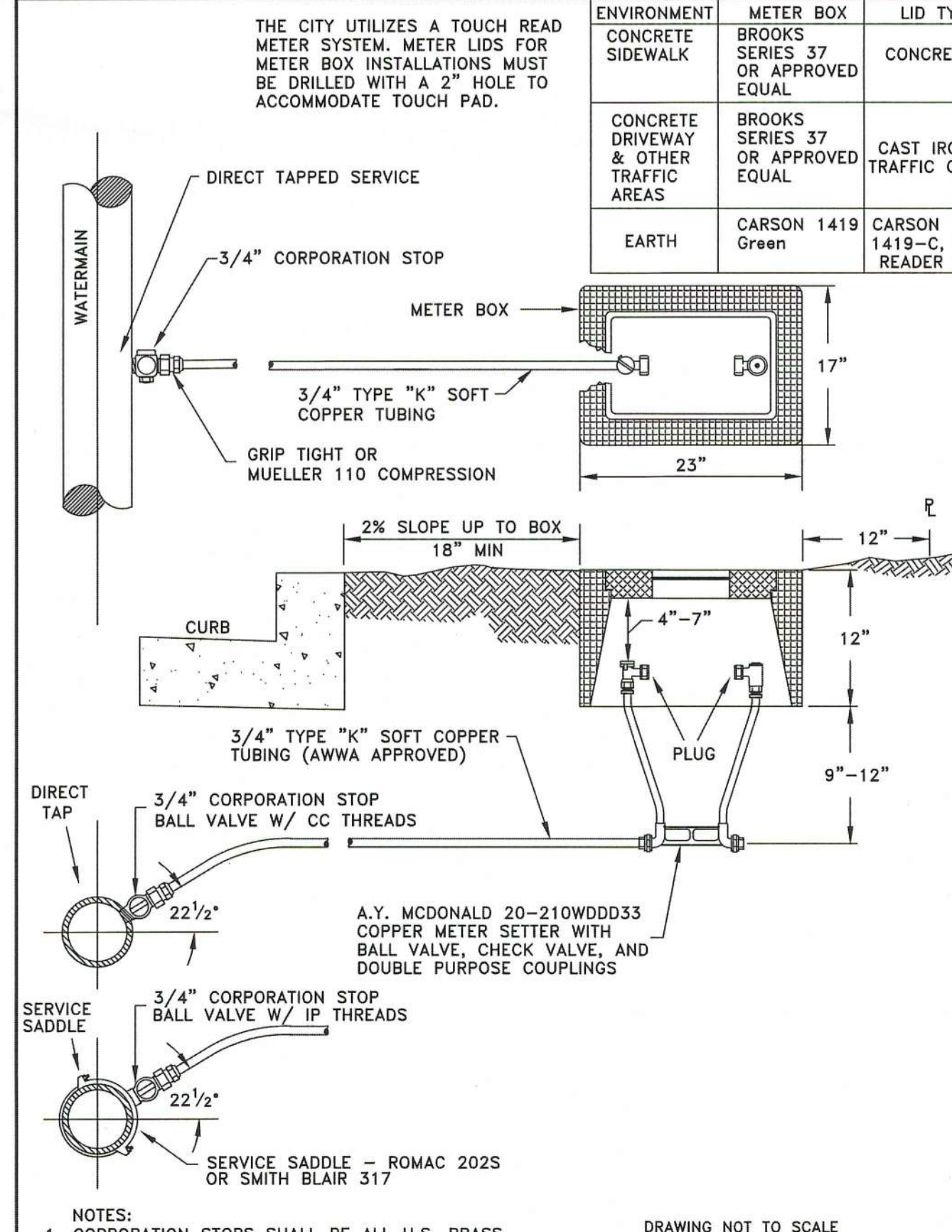
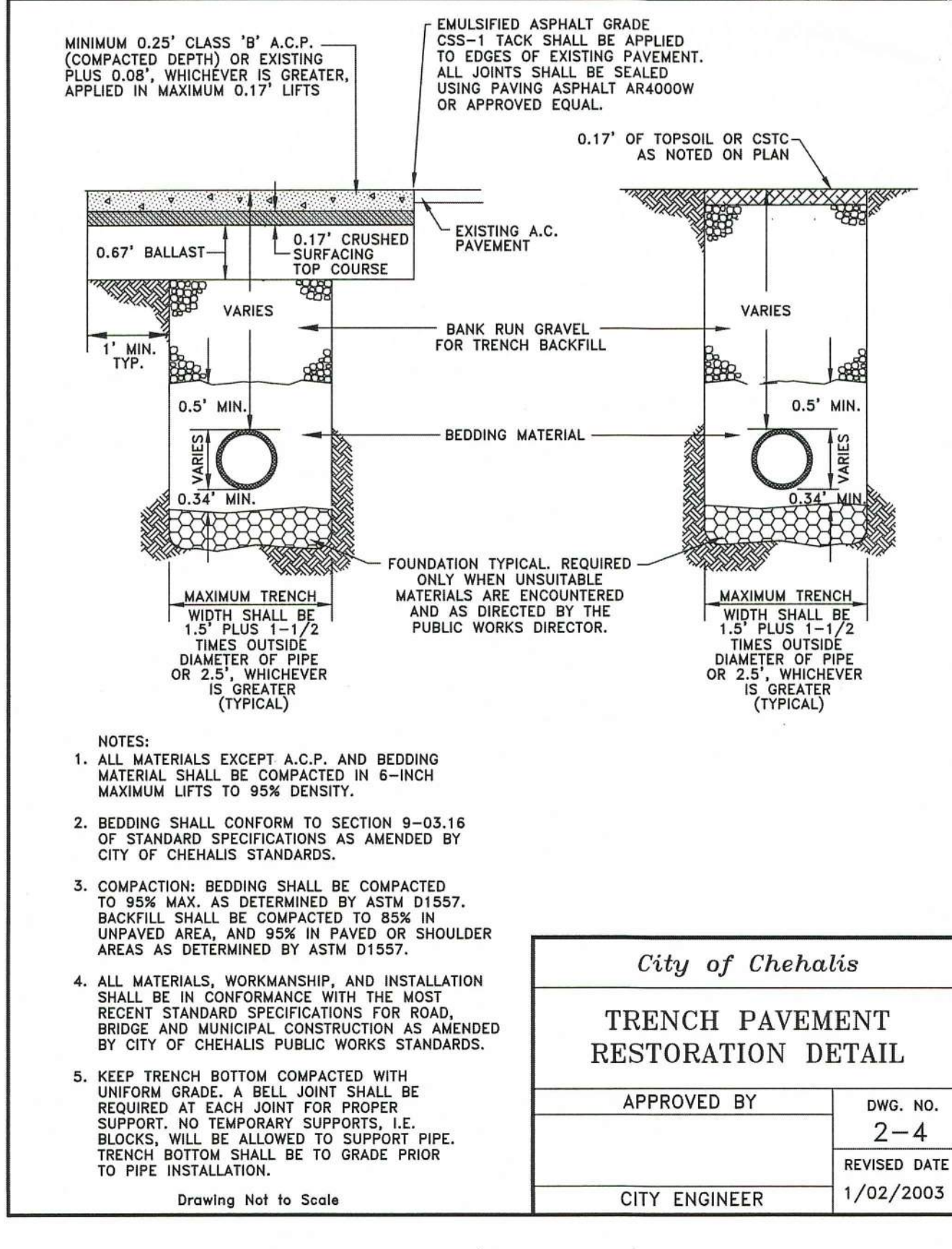
**City of Napavine**

**THRUST LOADS**



**GENERAL NOTES (WATERMAIN INSTALLATION)**

- ALL MAIN LINE VALVES TO BE MARKED WITH CITY APPROVED CONCRETE OFFSET WATER MARKERS.
- ALL SERVICE LINES AND STUB MAINS TO BE MARKED WITH CITY APPROVED MARKERS.
- ALL WORKMANSHIP AND MATERIAL WILL BE IN ACCORDANCE WITH CITY OF NAPAVINE STANDARDS AND THE MOST RECENT COPY OF THE WSDOT/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS AND ANSI/NSF STANDARD 60 OR 61.
- A PRE-CONSTRUCTION MEETING WILL BE HELD WITH THE PUBLIC WORKS DEPARTMENT PRIOR TO THE START OF CONSTRUCTION.
- ALL WATERMANS WILL BE DUCTILE IRON CEMENT MORTAR LINED THICKNESS CLASS 52 OR C900 PVC AS APPROVED.
- GATE VALVES WILL BE RESILIENT WEDGE, NRS (NON-RISING STEM) WITH O-RINGS SEALS. VALVE ENDS WILL BE MECHANICAL JOINT OR ANSI FLANGES. VALVES WILL CONFORM TO AWWA 509-80. VALVES WILL BE MUELLER, M&H, KENNEDY, CLOW R/W OR WATEROUS SERIES 500. EXISTING VALVES AND ALL VALVES INSTALLED DIRECTLY TO AND CONNECTED TO A PORTION OF THE ACTIVE WATER SYSTEM ARE TO BE OPERATED BY CITY EMPLOYEES **ONLY**.
- FIRE HYDRANTS WILL BE INSTALLED EVERY 200' M&H SERIES 929, AND BE EQUIPPED WITH STORZ ADAPTORS. HYDRANTS WILL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE UNIFORM FIRE CODE. HYDRANTS WILL BE BAGGED AND THE CONNECTING GATE VALVES LEFT CLOSED UNTIL THE SYSTEM HAS BEEN APPROVED. HYDRANTS MUST BE PAINTED WITH SUNBURST YELLOW HIGH-GRADE ENAMEL AFTER INSTALLATION.
- ALL LINES WILL BE CHLORINATED AND TESTED IN CONFORMANCE WITH THE ABOVE REFERENCED SPECIFICATIONS. (SEE NOTE 1)
- ALL PIPES AND SERVICES WILL BE INSTALLED WITH CONTINUOUS TRACER TAPE PLACED TWELVE (12) TO EIGHTEEN (18) INCHES UNDER THE PROPOSED FINISHED SUBGRADE. THE MARKER WILL BE OF PLASTIC NON-BIODEGRADABLE, METAL CORE, OR BACKING MARKED "WATER" THAT CAN BE DETECTED BY A STANDARD METAL DETECTOR. TAPE WILL BE TERRA TAPE "D" OR APPROVED EQUAL. IN ADDITION TO TRACER TAPE, TONING WIRE WILL BE INSTALLED OVER ALL PIPE AND SERVICES. TONING WIRE WILL BE UL LISTED, TYPE UF, FOURTEEN (14) GAUGE SOLID COATED COPPER WIRE, TAPED TO THE TOP OF THE PIPE TO PREVENT MOVEMENT DURING BACKFILLING AND LAID LOOSE ENOUGH TO PREVENT STRETCHING AND DAMAGE BEFORE BEING BROUGHT UP AND TIED OFF AT THE VALVE OPERATING NUT OR VALVE BOX. IF THE OPERATING NUT IS NOT EASILY ACCESSIBLE FROM THE GROUND SURFACE, THE COPPER WIRE WILL BE TIED OFF AT THE VALVE BOX IN SUCH A WAY THAT THE WIRE IS EASILY ACCESSIBLE FROM THE GROUND SURFACE. TWO (2) FEET OF SLACK WILL BE PROVIDED TO ALLOW FOR CONNECTION TO THE LOCATOR.
- 1-LB MAGNESIUM ANODE WILL BE BURIED WITH THE PIPE EVERY 1,000 LINEAR FEET MAXIMUM FOR CATHODIC PROTECTION OF THE TONING WIRE. TONING WIRE SPICES AND CONNECTIONS TO ANODES WILL JOIN WIRES BOTH MECHANICALLY AND ELECTRICALLY AND WILL EMPLOY EPOXY RESIN OR HEAT-SHRINK TAPE INSULATION. TONING WIRE WILL BE TESTED PRIOR TO ACCEPTANCE OF THE PIPE SYSTEM. A WRITTEN NOTICE FROM THE CONTRACTOR TO THE CITY MUST BE RECEIVED TWO (2) BUSINESS DAYS PRIOR TO WHEN TESTING IS REQUIRED.
- THE CONTRACTOR WILL PROVIDE TRAFFIC CONTROL PLAN(S) AS REQUIRED IN ACCORDANCE WITH MUTCD AND APPROVED BY CITY OF NAPAVINE.
- ALL WATERMANS WILL BE STAKED FOR GRADES AND ALIGNMENT BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK. STAKING WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- ALL SERVICE LINES AND WATER VALVE LOCATIONS WILL BE MARKED ON THE FACE OF THE ADJACENT CURB WITH A "W" OR "WV" EMBOSSED 1/2 INCH INTO THE CONCRETE OR WITH CITY APPROVED MARKERS.
- ALL WATER SYSTEM CONNECTIONS SERVING BUILDINGS OF PROPERTIES WITH DOMESTIC POTABLE WATER, FIRE SPRINKLER OR IRRIGATIONS SYSTEMS WILL COMPLY WITH THE MINIMUM BACKFLOW PREVENTION REQUIREMENTS ESTABLISHED BY THE DEPARTMENT OF HEALTH (DOH) AND THE CITY OF NAPAVINE CROSS-CONNECTION CONTROL PROGRAM.
- CALL UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO ANY EXCAVATIONS.
- THE CONTRACTOR TO NOTIFY THE CITY FIVE (5) BUSINESS DAYS PRIOR TO SCHEDULING A WATER SYSTEM SHUTDOWN. THE CITY'S WATER DIVISION WILL PERFORM ALL WATER SYSTEM SHUTDOWNS. WHEN CONNECTIONS REQUIRE "FIELD VERIFICATION", CONNECTION POINTS WILL BE EXPOSED BY THE CONTRACTOR AND FITTING VERIFIED BY THE CITY TWO (2) BUSINESS DAYS PRIOR TO THE DISTRIBUTION OF SHUTDOWN NOTICES. CUSTOMERS INVOLVED WITH OR AFFECTED BY WATER SERVICE INTERRUPTIONS WILL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE. SHUTDOWNS WILL NOT BE PERMITTED ON FRIDAYS, WEEKENDS, OR HOLIDAYS WITHOUT WRITTEN AUTHORIZATION FROM THE DIRECTOR OF PUBLIC WORKS.
- WHEN CONNECTING TO AN EXISTING WATERLINE WHERE A NEW VALVE IS **NOT** TO BE INSTALLED, THE EXISTING VALVE MUST BE PRESSURE TESTED TO THESE STANDARDS BY THE CONTRACTOR PRIOR TO CONNECTION. IF AN EXISTING VALVE FAILS TO PASS THE TEST, THE CONTRACTOR WILL MAKE THE NECESSARY ADDITIONAL PROVISIONS TO TEST THE NEW LINE PRIOR TO CONNECTING TO THE EXISTING SYSTEM OR WILL INSTALL A NEW VALVE. NEW LINES WILL NOT BE CONNECTED TO THE EXISTING SYSTEM UNTIL ALL REQUIRED TESTS HAVE BEEN PASSED.



REVISION  
1st CITY REVIEW COMMENTS

NO. DATE  
1 16.6.22

DESIGNED BY: ZRW  
DRAWN BY: ZRW  
CHECKED BY: RWB  
DATE: 5/24/2022  
SCALE: NO. SCALE

NEWALUKUM ST. TRIPLEX

WA.  
CITY OF NAPAVINE

WATER DETAILS AND NOTES

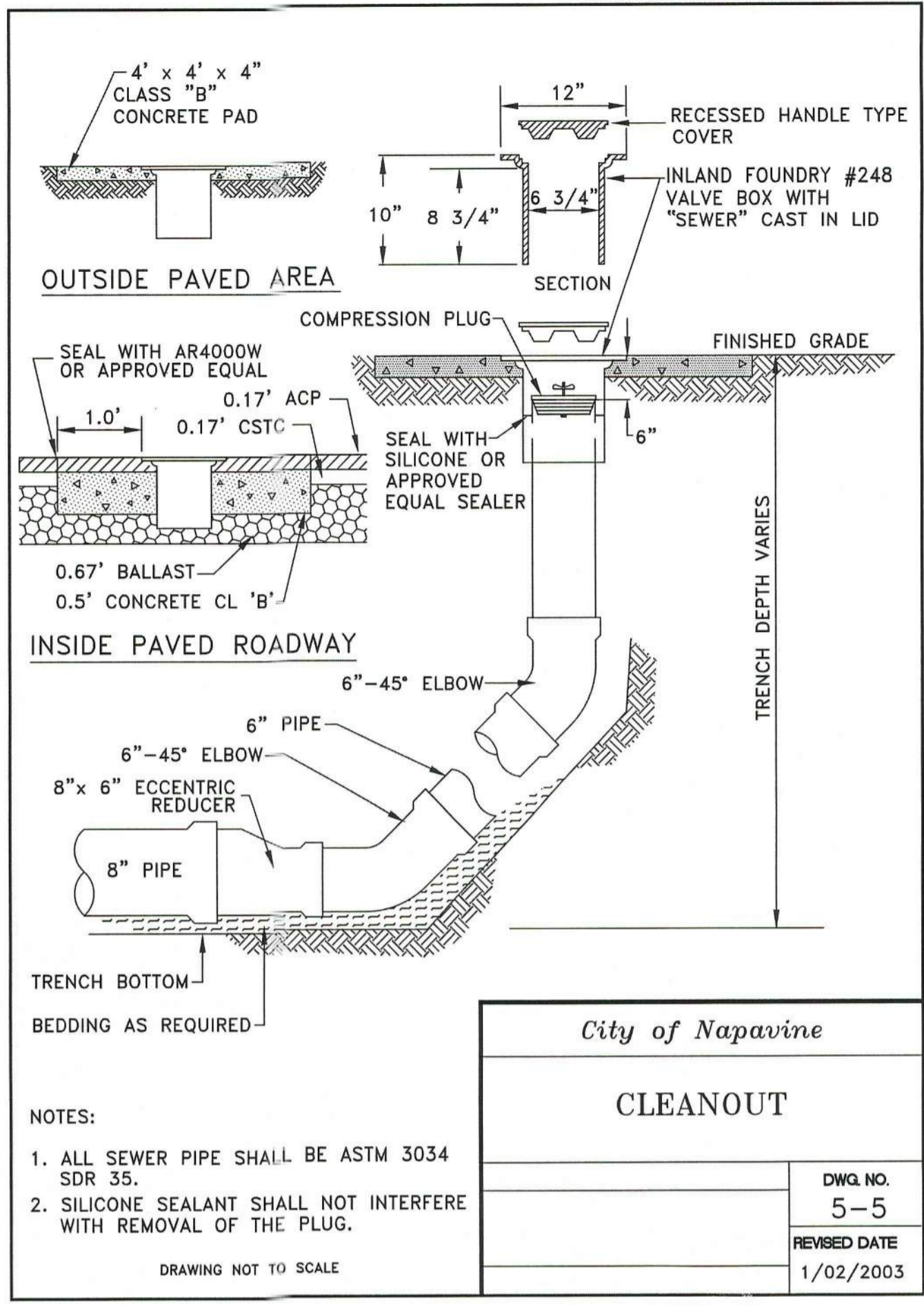
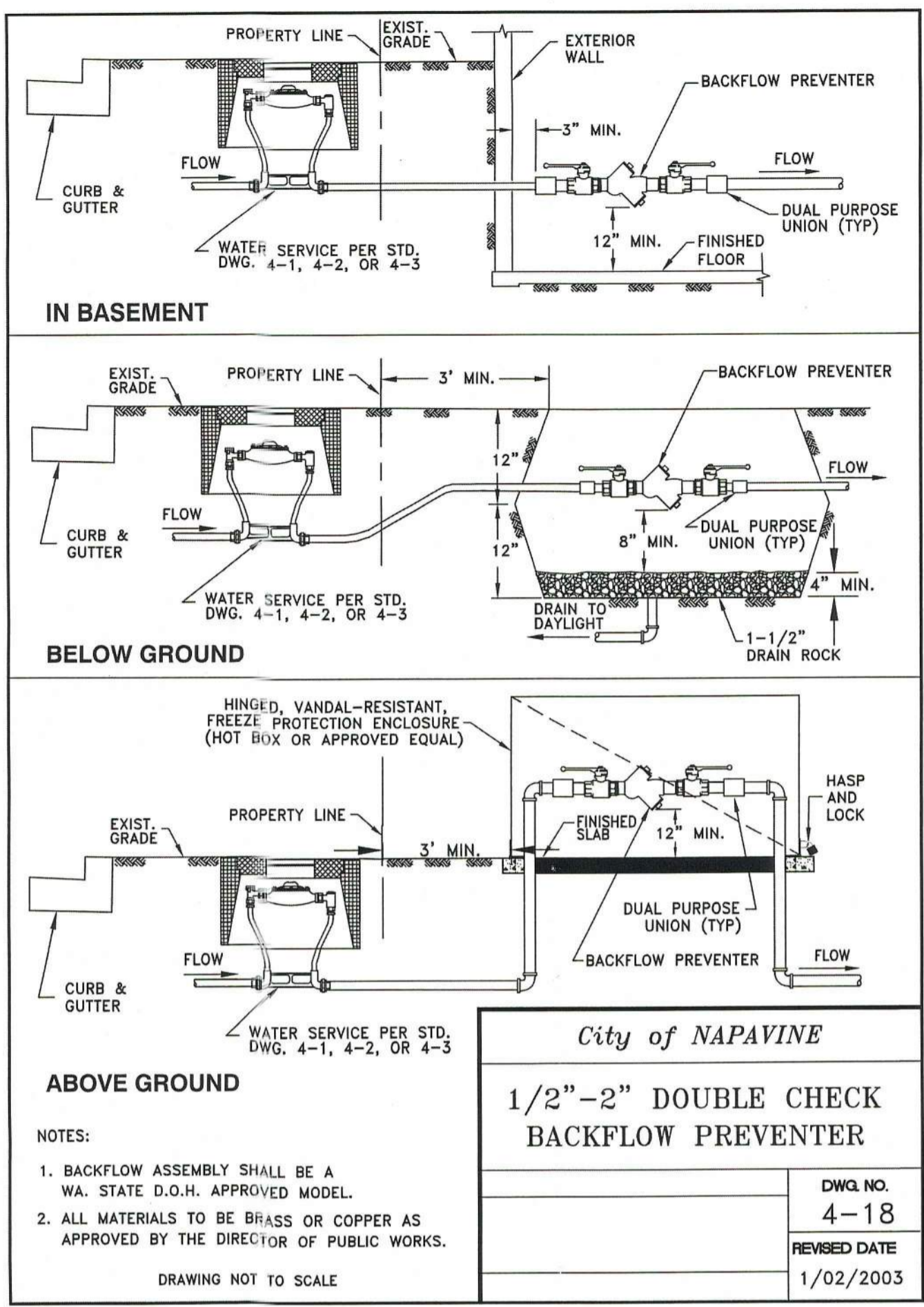
**RB Engineering**  
DESIGN - PERMIT - MANAGE

OFF: (509) 740-8819  
EMAIL: info@rbengineering.com  
P.O. Box 923  
CHEHALIS, WA 98532

Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

**CITY OF NAPAVINE PERMITS**  
JUN 08 2022  
BM APPROVED

JOB NUMBER 21068  
DRAWING NAME 21068-WTD  
**C3.2**  
8 OF 11



**GENERAL NOTES (SANITARY SEWER MAIN INSTALLATION)**

1. ALL WORKMANSHIP AND MATERIALS WILL BE IN ACCORDANCE WITH CITY OF NAPAVINE STANDARDS AND THE MOST RECENT COPY OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
2. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF NAPAVINE WILL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
3. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY RIGHT-OF-WAY, THE CONTRACTOR WILL NOTIFY THE COUNTY AND OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS.
4. A PRE-CONSTRUCTION MEETING WILL BE HELD WITH A PUBLIC WORKS DEPARTMENT REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
5. THE PUBLIC WORKS DEPARTMENT WILL BE NOTIFIED A MINIMUM OF TWO (2) BUSINESS DAYS IN ADVANCE OF A TAP CONNECTION TO AN EXISTING MAIN. A PUBLIC WORKS REPRESENTATIVE WILL BE PRESENT AT THE TIME OF THE TAP.
6. THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR WILL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO ANY EXCAVATION.
7. ALL SEWER MAINS WILL BE FIELD STAKED FOR GRADES AND ALIGNMENT BY A LICENSED ENGINEERING OR SURVEYING FIRM QUALIFIED TO PERFORM SUCH WORK. STAKING WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.
8. ALL PIPE AND SERVICES WILL BE INSTALLED WITH CONTINUOUS TRACER TAPE PLACED TWELVE (12) TO EIGHTEEN (18) INCHES UNDER THE PROPOSED FINISHED SUBGRADE. THE MARKER WILL BE OF PLASTIC NON-BIODEGRADABLE, METAL CORE OR BACKING MARKED "SEWER" THAT CAN BE DETECTED BY A STANDARD METAL DETECTOR. IF VISIBILITY CANNOT BE MAINTAINED BETWEEN STRUCTURES ALONG THE STRAIGHT ALIGNMENT OF A SEWER, TONING WIRE WILL BE INSTALLED ABOVE THE SEWER LINE AT A DEPTH NO GREATER THAN 48 INCHES. TAPE WILL BE TERRA TAPE "D" OR AN APPROVED EQUAL. IN ADDITION, STEP MAINS, FORCE MAINS, AND CURVILINEAR SEWERS WILL BE INSTALLED WITH TONING WIRE TAPED TO THE TOP OF THE PIPE TO PREVENT MOVEMENT DURING BACKFILL.

IF TONING WIRE IS REQUIRED, IT WILL BE UL LISTED, TYPE UF, 14-GAUGE COPPER. THE WIRE WILL BE LAID LOOSELY ENOUGH TO PREVENT STRETCHING AND DAMAGE. THE WIRE WILL BE WRAPPED TO A MANHOLE OR CLEANOUT RINGS ON GRAVITY SEWER OR VALVE BODY ON STEP MAINS.

A 1-LB MAGNESIUM ANODE WILL BE BURIED WITH THE PIPE EVERY 1,000 LINEAR FEET MAXIMUM FOR CATHODIC PROTECTION OF THE WIRE. TONING WIRE SPLICES AND CONNECTIONS TO ANODES WILL JOIN WIRES BOTH MECHANICALLY AND ELECTRICALLY AND WILL EMPLOY EPOXY RESIN OR HEAT-SHRINK TAPE INSULATION. TONING WIRE WILL BE TESTED PRIOR TO ACCEPTANCE OF THE PIPE SYSTEM. A WRITTEN NOTICE FROM THE CONTRACTOR TO THE CITY TWO (2) BUSINESS DAYS PRIOR TO TESTING IS REQUIRED. ON A CURVILINEAR SEWER, THE WIRE WILL BE BROUGHT UP, BARED AND WRAPPED THREE (3) TIMES AROUND THE MANHOLE RING. THE TAPE AND WIRE WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

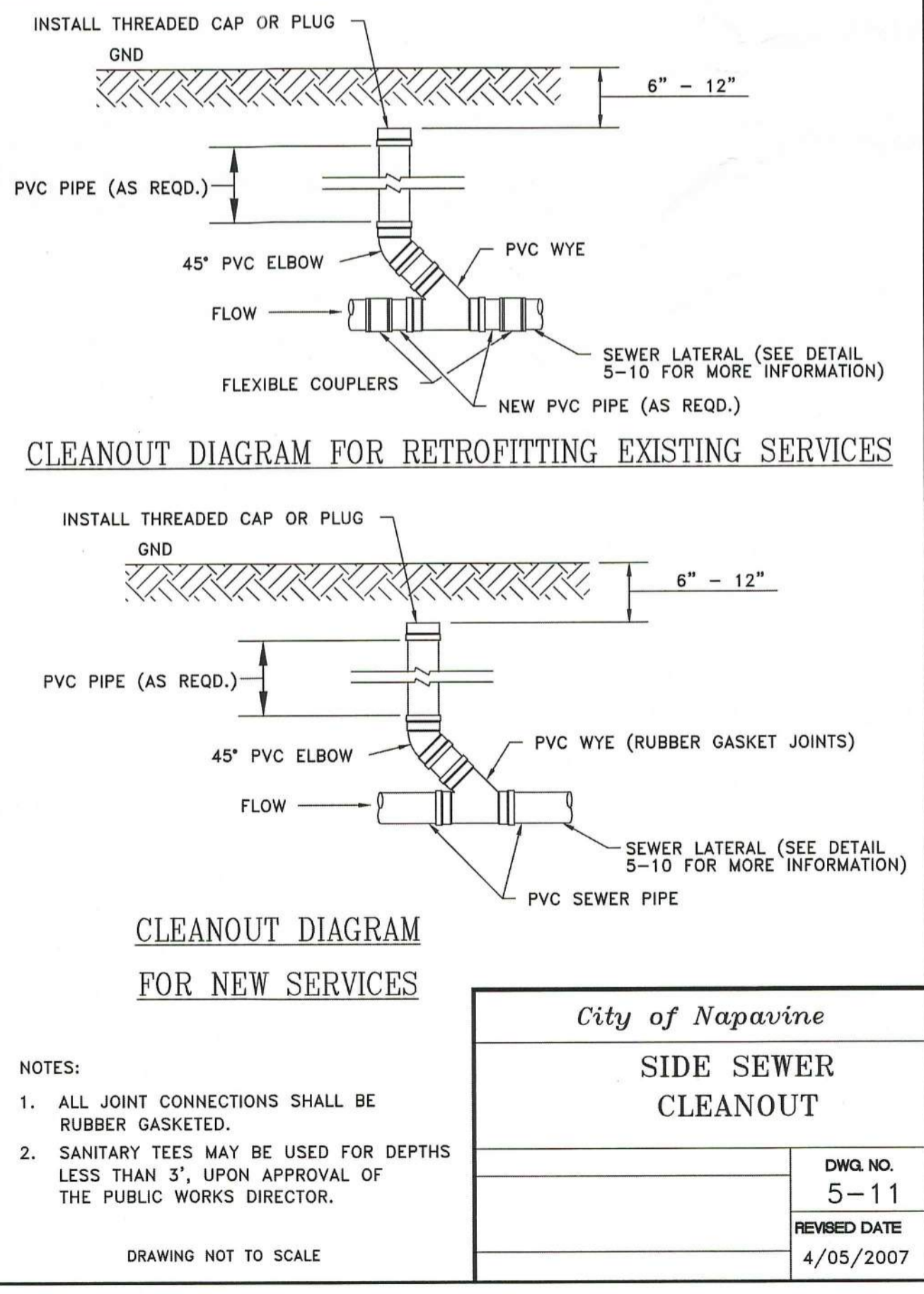
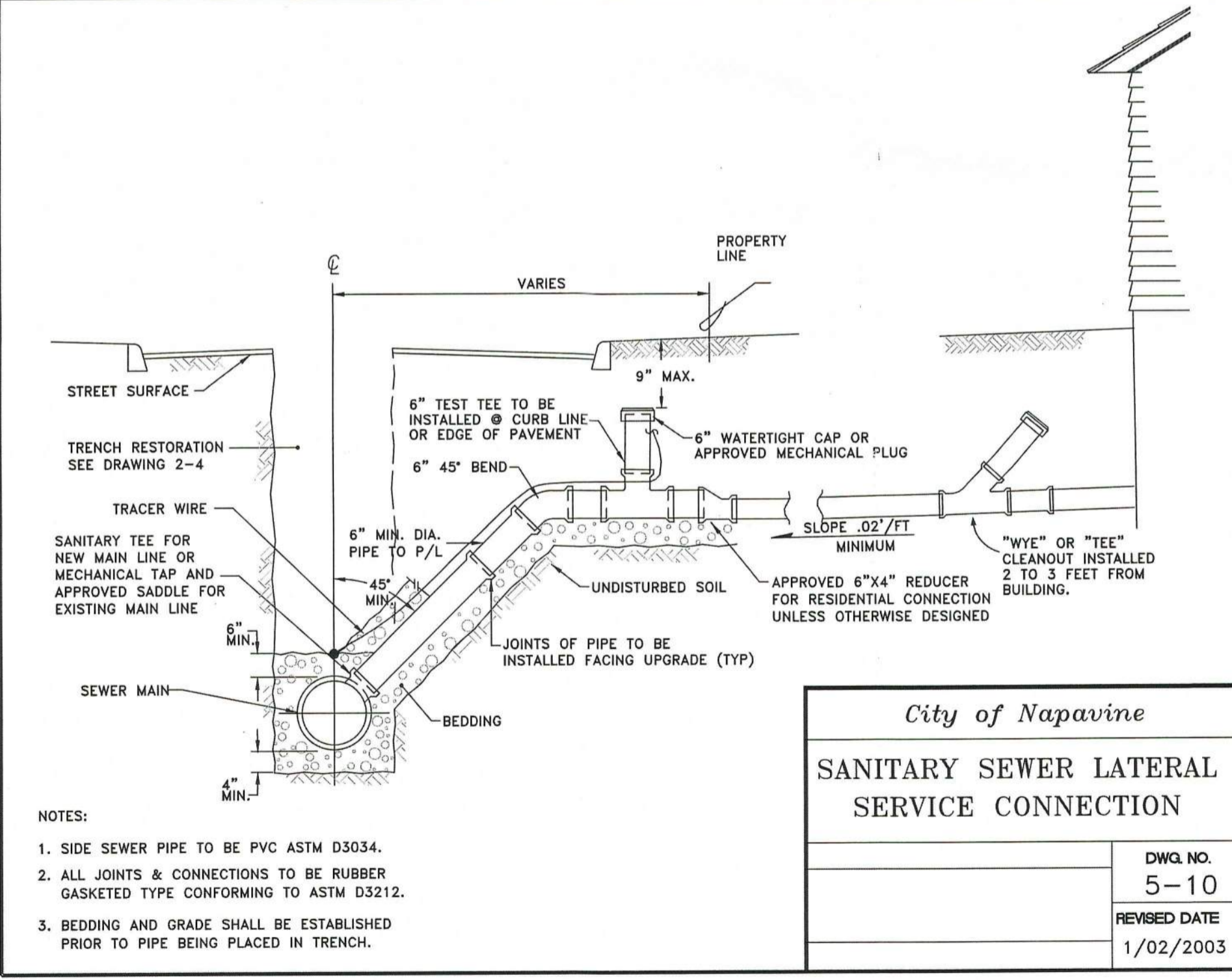
9. BEDDING OF THE SEWER MAIN AND COMPACTION OF THE BACKFILL MATERIAL WILL BE REQUIRED IN ACCORDANCE WITH THE ABOVE SPECIFICATION. (SEE GENERAL NOTE 1)
10. ALL MANHOLES AND CLEANOUTS OUTSIDE THE PAVED AREA WILL BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWINGS 5.3 AND 5.5.
11. WHEN TEMPORARY STREET PATCHING IS ALLOWED BY THE CITY, COLD MIX ASPHALT WILL BE PLACED TO A MAXIMUM DEPTH OF ONE (1) INCH. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED BY THE CITY.
12. EROSION CONTROL MEASURES CONFORMING TO THE MOST RECENT VERSION OF THE CITY OF NAPAVINE STORMWATER MANAGEMENT PLAN AND CHAPTER 3 OF THESE STANDARDS WILL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.
13. PROVIDE TRAFFIC CONTROL PLAN(S) IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS REQUIRED.
14. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED CONSTRUCTION PLANS ON-SITE AT ALL TIMES. "APPROVED" PLANS, ARE TYPICALLY SIGNIFIED BY THE SIGNATURE OF THE DIRECTOR OF PUBLIC WORKS.
15. ANY CHANGES TO THE DESIGN WILL FIRST BE REVIEWED AND APPROVED BY THE DEVELOPER'S PROJECT ENGINEER AND THEN THE DIRECTOR OF PUBLIC WORKS PRIOR TO IMPLEMENTATION.
16. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES WILL BE INSPECTED AND APPROVED BY A PUBLIC WORKS REPRESENTATIVE. APPROVAL DOES CONSTITUTE FINAL ACCEPTANCES OF THE SEWER LINE. THE CONTRACTOR WILL RETAIN RESPONSIBILITY TO REPAIR ALL DEFICIENCIES AND FAILURES REVEALED DURING ALL REQUIRED TESTING FOR ACCEPTANCE AND THROUGHOUT THE DURATION OF THE WARRANTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PUBLIC WORKS DEPARTMENT IN ADVANCE OF ALL REQUIRED INSPECTIONS. ANY MAIN OR APPURTENANCE BACKFILLED PRIOR TO INSPECTION WILL BE RE-EXCAVATED FOR INSPECTION AT NO COST TO THE CITY.

**GRAVITY SEWER**

1. GRAVITY SEWER MAINS WILL MEET THE FOLLOWING: PVC PIPE WILL CONFORM TO ASTM P 3034 SDR 35, ASTM F 794, OR ASTM F 679 TYPE 1 WITH JOINTS AND GASKETS CONFORMING TO ASTM 3212 AND ASTM F 477.
2. PRE-CAST MANHOLES WILL MEET THE REQUIREMENTS OF ASTM C 478. MANHOLES WILL BE TYPE 1-48" AS SPECIFIED ON THE PLANS. JOINTS WILL BE RUBBER GASKET CONFORMING TO ASTM C 443 AND WILL BE GROUTED FROM THE INSIDE. LIFT HOLES WILL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE (SEE GENERAL NOTE 1).
3. SIDE SEWER SERVICES WILL BE PVC, ASTM D 3034 SDR 35 WITH FLEXIBLE GASKET JOINTS. SIDE SEWER CONNECTIONS WILL BE MADE BY A SADDLE TAP TO AN EXISTING MAIN, (SEE STANDARD DRAWING 5-12), OR A SANITARY TEE FROM A NEW MAIN CONNECTED ABOVE THE SPRINGLINE OF THE PIPE. SIDE SEWER SERVICES WILL BE INSTALLED ACCORDING TO APPLICABLE STANDARD DETAIL(S).
4. ALL SIDE SEWER LOCATIONS WILL BE MARKED ON THE FACE OF THE CURB WITH AN "S" EMBOSSED 1/4-INCH INTO THE CONCRETE.
5. ALL LINES WILL BE HIGH VELOCITY CLEANED, TELEVIEWED, AND SUBJECTED TO A LOW PRESSURE AIR TEST PER CURRENT WSDOT/APWA SPECIFICATIONS AFTER BACKFILLING, BUT PRIOR TO PAVING (SEE GENERAL NOTE 1). HYDRANT FLUSHING OF LINES IS NOT AN ACCEPTABLE CLEANING METHOD. TESTING OF THE SANITARY SEWER MAIN WILL INCLUDE TELEVISION INSPECTING OF THE MAIN BY AND AT THE EXPENSE OF THE CONTRACTOR IN THE PRESENCE OF A PUBLIC WORKS REPRESENTATIVE. IMMEDIATELY PRIOR TO TELEVISION INSPECTING, ENOUGH WATER WILL BE RUN DOWN THE LINE TO COME OUT THE LOWER MANHOLE AND THE LINE IS FLUSHED CLEAN. A COPY OF THE VIDEO WILL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT. ACCEPTANCE OF THE LINE WILL BE MADE AFTER THE TAPE HAS BEEN REVIEWED AND APPROVED BY THE INSPECTOR. A TEST OF ALL MANHOLES IN ACCORDANCE WITH THESE STANDARDS IS ALSO REQUIRED. TESTING WILL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SUBGRADE IS COMPLETED.

**STEP SYSTEMS**

1. ALL BURIED POWER FOR STEP SYSTEMS WILL BE INSTALLED ACCORDING TO ALL CURRENT AND APPLICABLE ELECTRICAL CODES.
2. ALL BURIED POWER FOR STEP SYSTEMS WILL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED TWELVE (12) INCHES ABOVE THE BURIED POWER. THE MARKER WILL BE PLASTIC NON-BIODEGRADABLE METAL CORE BACKING MARKED "POWER." TAPE TO BE FURNISHED BY THE CONTRACTOR.
3. ALL STEP MAINS WILL BE HYDROSTATICALLY TESTED AT 100 PSIG FOR FIFTEEN (15) MINUTES ACCORDING TO THE METHODS FOR HYDROSTATIC TESTING OF WATERLINES IN THE MOST RECENT VERSION OF THE WSDOT/APWA SPECIFICATIONS. ALL MATERIALS AND LABOR ARE TO BE PROVIDED BY THE CONTRACTOR. IN ADDITION, ALL STEP MAINS WILL BE PIGGED IN THE PRESENCE OF A PUBLIC WORKS REPRESENTATIVE, PRIOR TO PLACING THE STEP MAIN IN SERVICE.



9. BEDDING OF THE SEWER MAIN AND COMPACTION OF THE BACKFILL MATERIAL WILL BE REQUIRED IN ACCORDANCE WITH THE ABOVE SPECIFICATION. (SEE GENERAL NOTE 1)

10. ALL MANHOLES AND CLEANOUTS OUTSIDE THE PAVED AREA WILL BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWINGS 5.3 AND 5.5.

11. WHEN TEMPORARY STREET PATCHING IS ALLOWED BY THE CITY, COLD MIX ASPHALT WILL BE PLACED TO A MAXIMUM DEPTH OF ONE (1) INCH. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED BY THE CITY.

12. EROSION CONTROL MEASURES CONFORMING TO THE MOST RECENT VERSION OF THE CITY OF NAPAVINE STORMWATER MANAGEMENT PLAN AND CHAPTER 3 OF THESE STANDARDS WILL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.

13. PROVIDE TRAFFIC CONTROL PLAN(S) IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS REQUIRED.

14. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED CONSTRUCTION PLANS ON-SITE AT ALL TIMES. "APPROVED" PLANS, ARE TYPICALLY SIGNIFIED BY THE SIGNATURE OF THE DIRECTOR OF PUBLIC WORKS.

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16. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES WILL BE INSPECTED AND APPROVED BY A PUBLIC WORKS REPRESENTATIVE. APPROVAL DOES CONSTITUTE FINAL ACCEPTANCES OF THE SEWER LINE. THE CONTRACTOR WILL RETAIN RESPONSIBILITY TO REPAIR ALL DEFICIENCIES AND FAILURES REVEALED DURING ALL REQUIRED TESTING FOR ACCEPTANCE AND THROUGHOUT THE DURATION OF THE WARRANTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PUBLIC WORKS DEPARTMENT IN ADVANCE OF ALL REQUIRED INSPECTIONS. ANY MAIN OR APPURTENANCE BACKFILLED PRIOR TO INSPECTION WILL BE RE-EXCAVATED FOR INSPECTION AT NO COST TO THE CITY.

Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

**CITY OF NAPAVINE PERMITS**

JUN 08 2022

Bm APPROVED

NO. DATE	1 6.6.22	1st CITY REVIEW COMMENTS
DESIGNED BY:	ZRW	CHECKED BY: RWB
DRAWN BY:	ZRW	DATE: 5/24/2022
SCALE:	NO. SCALE	WA.

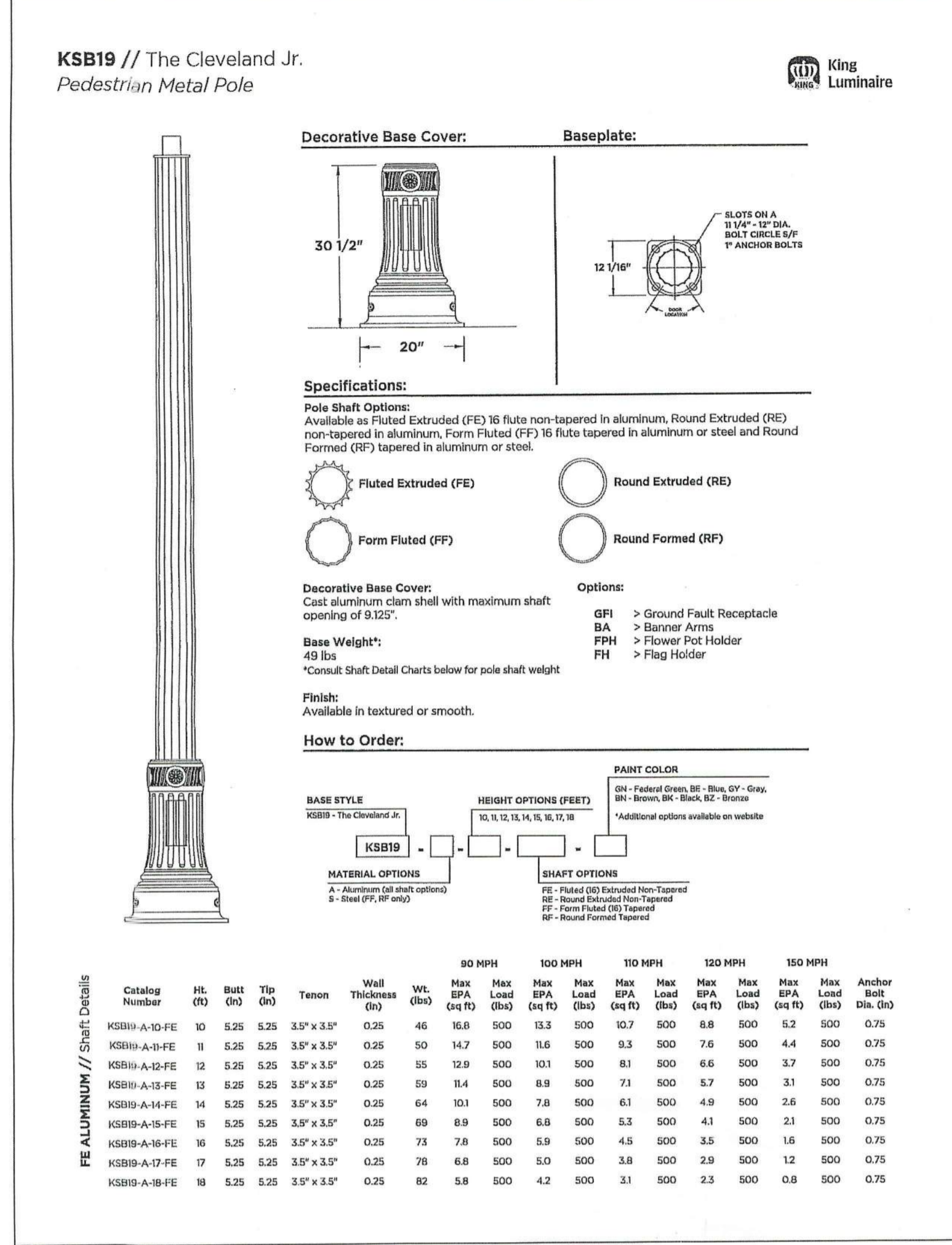
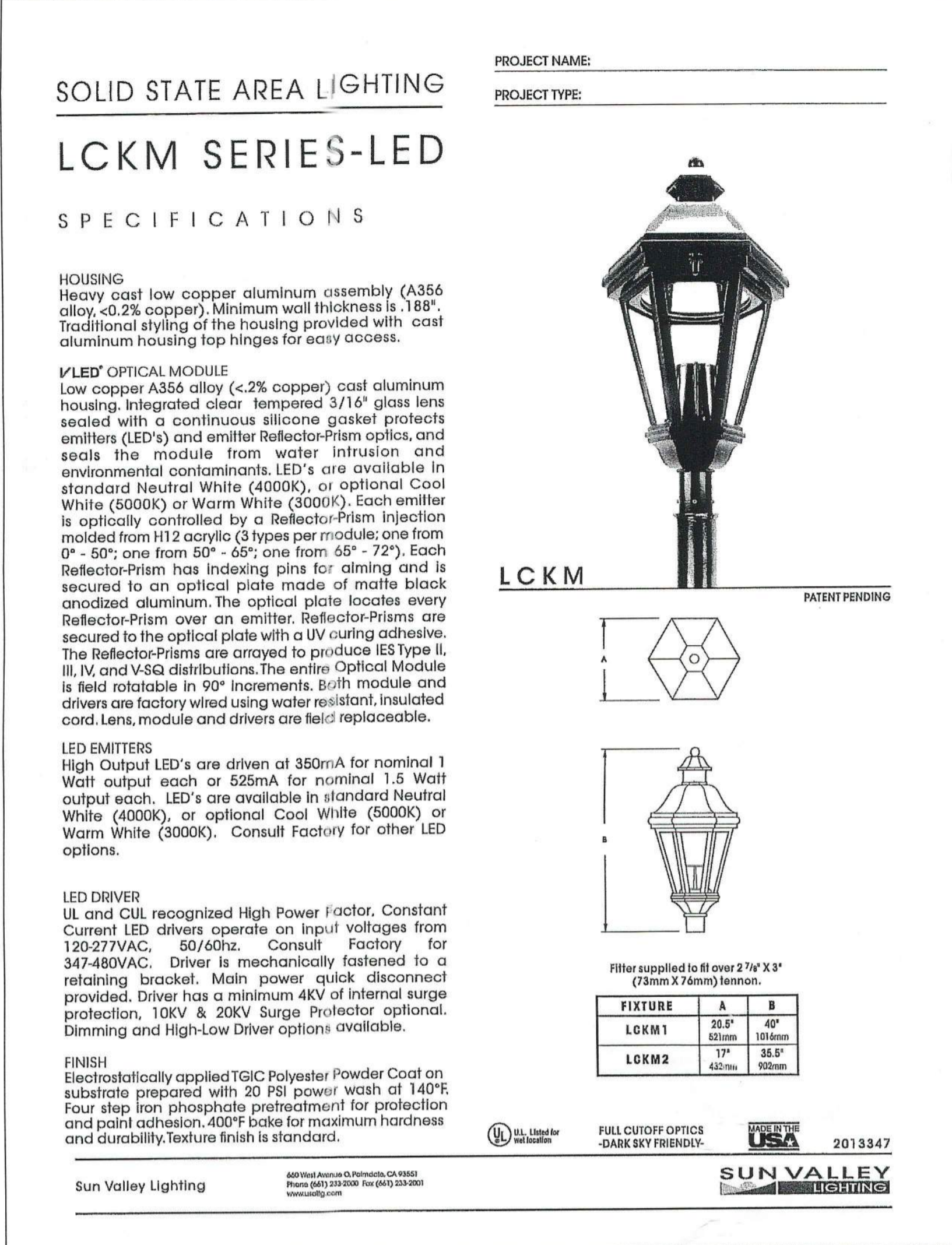
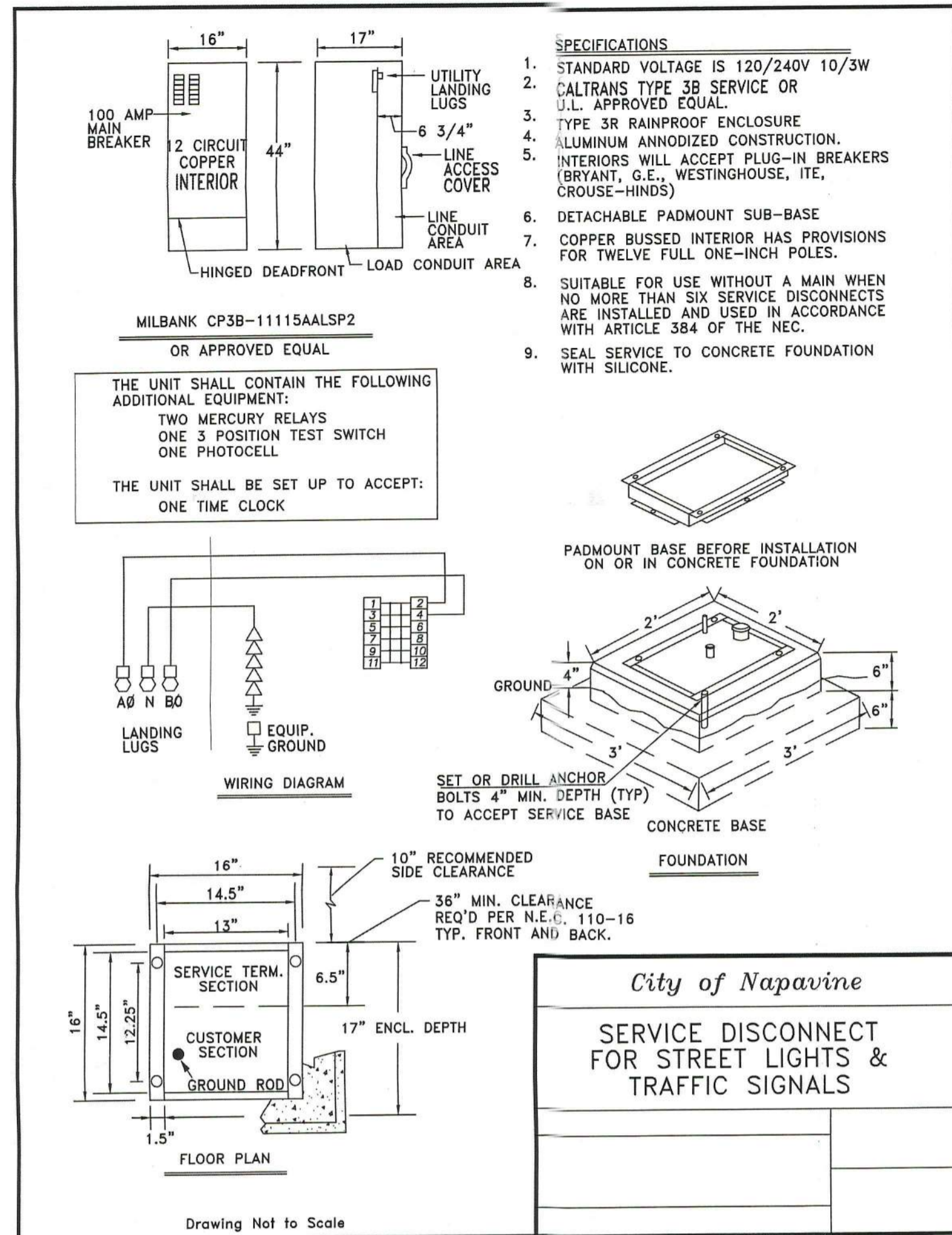
**NEWAUKUM ST. TRIPLEX**

**SEWER DETAILS AND NOTES**

**R.B. Engineering**  
DESIGN - PERMIT - MANAGE  
P.O. Box 923 CHEHALIS, WA 98532  
OFF: (360) 740-8919  
EMAIL: Office@RBEng.com

**811** Know what's below. Call 811 before you dig.

JOB NUMBER 21068  
DRAWING NAME 21068\_SWDT  
**C3.3**  
9 OF 11



Any code requirements that may have been overlooked in this plan review, DOES NOT imply that the requirements has been waived. NCD

CITY OF NAPAVINE PERMITS  
 JUN 8 2022  
 DM APPROVED

REVISION  
 1 6.6.22 1st CITY REVIEW COMMENTS

DESIGNED BY: ZRW  
 DRAWN BY: ZRW  
 CHECKED BY: RWB  
 DATE: 5/24/2022  
 SCALE: NO SCALE

NEWAUKUM ST. TRIPLEX  
 CITY OF NAPAVINE, WA.

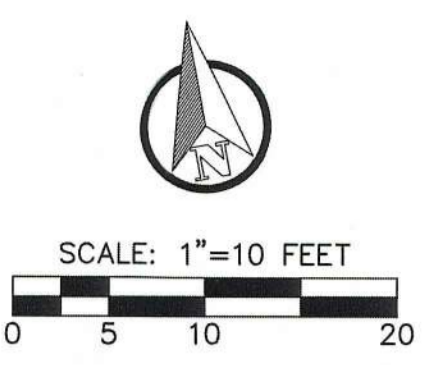
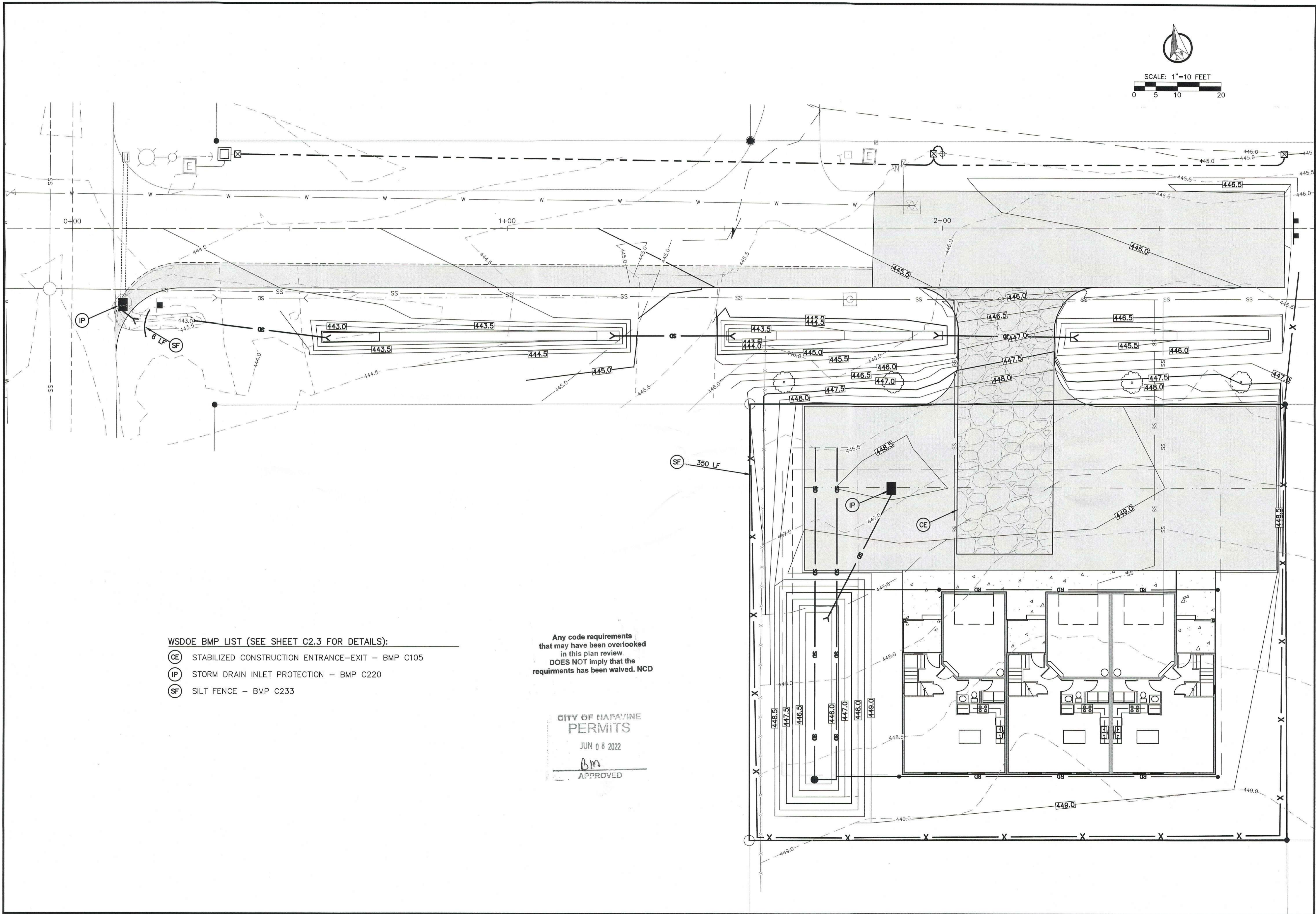
STREET LIGHT DETAILS AND NOTES

ROBERT W. BAKER  
 REGISTERED PROFESSIONAL ENGINEER

**RB Engineering**  
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 P.O. Box 923  
 CHEHALIS, WA 98532  
 OFF: (360) 746-8919  
 EMAIL: info@rbengineering.com

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JOB NUMBER: 21068  
 DRAWING NAME: 21068\_SLDT  
**C3.4**  
 10 OF 11



- WSDOE BMP LIST (SEE SHEET C2.3 FOR DETAILS):
- (CE) STABILIZED CONSTRUCTION ENTRANCE-EXIT - BMP C105
  - (IP) STORM DRAIN INLET PROTECTION - BMP C220
  - (SF) SILT FENCE - BMP C233

Any code requirements that may have been overlooked in this plan review DOES NOT imply that the requirements has been waived. NCD

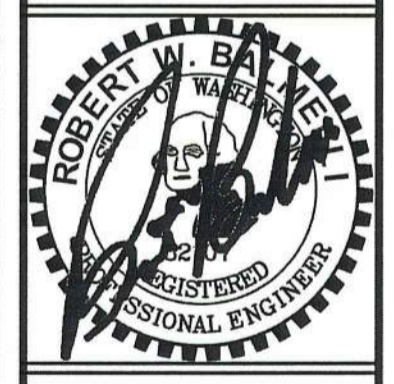
CITY OF NAPAVINE  
 PERMITS  
 JUN 08 2022  
 Bm  
 APPROVED

NO.	DATE	REVISION
1	6.6.22	1st CITY REVIEW COMMENTS

DESIGNED BY: ZRW  
 DRAWN BY: ZRW  
 CHECKED BY: RWB  
 DATE: 5/24/2022  
 SCALE: 1" = 10'

NEWAUKUM ST.  
 TRIPLEX  
 CITY OF NAPAVINE, WA.

T.E.S.C. PLAN



**RB Engineering**  
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 CHEHALIS, WA 98532  
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 EMAIL: info@rbengineers.com

811 Know what's below. Call 811 before you dig.  
 JOB NUMBER: 21068  
 DRAWING NAME: 21068\_TESCPL  
**C4.1**  
 11 OF 11

**NAPAVINE CITY COUNCIL**

**FINDINGS, CONCLUSIONS AND DECISION**

Variance Application No.: VA 04-12-2022

Applicant: Napavine Adventures, LLC – Kevin Klumper

Date of Open Public Meeting: Planning Commission Hearing Date: MAY 16, 2022  
City Council Hearing Date: MAY 24, 2022

Date of Written Decision: JUNE 8, 2022

**Summary of Decision.** The Applicant's request for Variance is [  ] **GRANTED** [  ] **DENIED**.

**Request for Variance.** The Applicant, NAPAVINE ADENTURES – KEVIN KLUMPER, is requesting a Variance to waive right-of-way improvements on a new 4-plex. The public right-of-way improvements the applicant is requesting to waive are curb, gutter, sidewalks, and streetlighting construction and allow extension of the existing 17-foot road matching the recent construction approved for East Newaukum Street. Applicant states due to the variance allotted to the developer on the north side of East Newaukum Street, the half street improvements would not align with the existing road. The Applicant, Napavine Adventures, LLC. – Kevin Klumper, is the owner of the property at issue which is located at 0 E. Newaukum St., Napavine (Lewis County Parcel No. 008243-001-001), referred to herein as the "Subject Property."

**Open Public Meeting Date.** City Council considered the request on May 24, 2022, in an open public meeting.

**Materials.** Prior to the open public meeting, the City Council was provided the following:

1. Unsigned copy of the Planning Commission's Findings of Fact and Final Order;
2. Summary of the project revisions by Robert Balmelli from RB Engineering;
3. Napavine Planning Commission Public Hearing Minutes of May 16, 2022;
4. Napavine Planning Commission Minutes of May 2, 2022;
5. Community Development Staff Report supplying NMC 12.04.060 C. New Residential Sub-Division Streets, NMC 17.24.050 R3 Permitted Dimensions, NDC 2B.02 Minimum Street Standards, and NDC 2D.02 Illumination Design Standards attached to Minutes referred to above;
6. Notice of Public Hearing;
7. Public Hearing Notification Affidavit of Posting (and mailing) and;
8. Variance Application;

During the open public meeting before the City Council, the following materials were provided:

No additional materials were submitted to the City Council. |

	Additional materials were submitted and are on file and made a part of the record. Describe: _____ _____
--	--

**Comment.** At the open public meeting, the Napavine Community Development Department presented the staff report and the opinion of the planning commission to the City Council.

**Public Comment.** At the open public meeting:

	No members of the community made comments in support of or in opposition to the Applicant's request.
--	--

	One or more members of the community made comments in support of the Applicant's request, and a summary of such comments together with identification of the individual(s) is on file herewith and made a part of the record.
--	---

<b>X</b>	One or more members of the community made comments in opposition to the Applicant's request, and a summary of such comments together with identification of the individual(s) is on file herewith and made a part of the record.
----------	--

**Findings.** Upon consideration of the materials and testimony received as set forth above, the Napavine City Council enters the following Findings:

1. Notice of the application for variance and notice of the open public meeting was properly given to the public and to residents within 300 feet of the Subject Property.
2. Applicant [ **X** ] IS [ ] IS NOT the owner of the Subject Property.

[ ] If the Applicant is NOT the owner of the Subject Property, the Applicant has speaking authority on behalf of the Owner.

3. The Subject Property is located within the jurisdictional boundaries of the City of Napavine.
4. This application for variance [ ] IS [ **X** ] IS NOT subject to environmental review.
5. The current condition of the Subject Property is: UNDEVELOPED
6. The Subject Property is zoned [ **X** ] Residential [ ] Commercial [ ]  
Other: \_\_\_\_\_.
7. Land uses of properties adjacent to the Subject Property are as follows:
  - i. Single family Dwelling to the North.
  - ii. Undeveloped lot to the East.
  - iii. Single family Dwelling to the South.

- iv. Single family Dwelling to the West.
  - v. City right of way to the North and South, with residential lots thereafter.
8. The surrounding property uses are residential.
  9. The area of the Subject Property is approximately 0.29 acres.
  10. The Subject Property and the surrounding neighborhood is zoned residential.
  11. As proposed, Applicant requests a variance to waive right-of-way improvements on a new 4-plex. The public right-of-way improvements the applicant is requesting to waive are curb, gutter, sidewalks, and streetlighting construction and allow extension of the existing 17-foot road matching the recent construction approved for East Newaukum Street. Applicant states due to the variance allotted to the developer on the north side of East Newaukum Street, the half street improvements would not align with the existing road.

However, after May 16, 2022, Planning Commission Meeting, Kevin Klumper's Engineer, Robert Balmelli, stated that the project would be better fit to extend the existing 17-foot width road to a full 22-foot width road, downsize the 4-plex to a 3-plex, and provide streetlighting on East Newaukum Street.

12. The requested Variance  IS  IS NOT based on special circumstances related to the size, shape, topography, location or surroundings of the Subject Property.
13. The current plight of the Applicant  IS  IS NOT due to the actions of the Applicant.
14. Allowing Applicant to waive right-of-way improvements for curb, gutter, sidewalks with the agreement to extend the existing 17-foot width road to a full 22-foot width road and provide streetlighting on East Newaukum Street  WOULD  WOULD NOT constitute a grant of special privilege.
15. Granting the requested variance  WOULD  WOULD NOT be materially detrimental to the public welfare.
16. Granting the requested variance  WILL  WILL NOT be injurious to nearby properties.
17. Granting the requested variance  WILL  WILL NOT adversely affect the goals and policies of the City of Napavine and its' comprehensive plan.
18. To the extent not fully set forth herein, the City Council incorporates the information presented in the materials to the Council, and incorporates Findings found in the Conclusions and Decision on this matter.

**Conclusions.** Upon consideration of the materials and comments received as set forth herein, and the Findings herein, the Napavine City Council makes the following Conclusions:



1. The City of Napavine, more specifically the Napavine City Council, has jurisdiction over the parties hereto, and the subject matter herein.
2. Applicant requests a variance from Napavine Municipal Code 12.04.060 C. New Residential Sub-Division Streets, Napavine Developer's Code 2B.02 Minimum Street Standards, and Napavine Developer's Code 2D.02 Illumination Design Standards.
3. The City is authorized to grant a variance following an open public meeting if the requirements of Napavine Municipal Code 17.80.040 are met, which states:

Where unnecessary hardships and practical difficulties, resulting from peculiarities of a specific property, render it difficult or inadequate to carry out all provisions of this title, the [city] shall have the power to grant a variance if it finds that the following conditions are met:

- A. The variance will not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and zone in which the subject property is located; and
  - B. Such variance is necessary, because of special circumstances relating to the size, shape, topography, location, or surroundings of the subject property, to provide it with use rights in the zone in which the subject property is located; and provided that such unusual circumstances or conditions do not exist throughout the neighborhood or zone in which the property is located, and provided further that such unusual circumstances or conditions have not been created by action of the applicant; and
  - C. The granting of such a variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the subject property is situated; and
  - D. The granting of such a variance will not adversely affect the comprehensive plan; and
  - E. The variance, if granted, will not alter the essential character of the neighborhood or district in which the property is located, nor substantially or permanently impair the appropriate use of development of the adjacent property; and
  - F. The variance so authorized shall become void after the expiration of six months if no substantial construction has taken place in accordance with the plans for which the variance was authorized.
4. To the extent not fully set forth herein, the City incorporates any Conclusions found in the Findings and Decision on this matter.

**Decision.** At the open public meeting held MAY 24, 2022, the City Council considered the materials presented and the comments received in support of and/or in opposition to this matter.

No motion was made by the City Council and as a result the Applicant's request for variance is denied.

Motion was made and seconded to [ **X** ] Grant [ ] Deny the Applicant's request for variance. Opportunity for discussion held. Motion [ **X** ] Approved [ ] Denied.

The decision of the City Council shall take effect upon entry of the Council's written decision.

As set forth herein, Applicant's request for Variance is [ **X** ] **GRANTED** [ ] **DENIED**.

If granted, this Variance shall become void after the expiration of six (6) months if no substantial construction has taken place in accordance with the plans for which the Variance was authorized.

**Note:** This decision of the Napavine City Council constitutes a land use decision as defined under Chapter 36.70C RCW. Accordingly, an aggrieved party has a right of appeal to the Lewis County Superior Court by way of Petition filed within twenty-one (21) days of issuance of this Decision.

DATED THIS 8th day of JUNE, 2022.

→   
MAYOR

Attest:  
→   
CLERK

**CITY OF NAPAVINE**

407 BIRCH AVE SW, P. O. BOX 810, NAPAVINE, WA 98565  
(360) 262-9344

**VARIANCE APPLICATION**

**Fee: \$**

File No. VA 04-12-2022 Date 3/29/22

Applicant Napavine Adventures - Kevin Klumper

Applicant's Address 790 S Market Blvd, Chehalis WA 98532

Location of property: 0 E Newaukum St, Napavine WA 98565

Lot 6 & 7 Block 26 Addition Rowells

- A. The above described property was acquired on May 24, 2021.
- B. A certificate of ownership and a list of owners of property located within 300 feet of this parcel must accompany this application.
- C. Do covenants, conditions or restrictions concerning type of improvements contemplated exist on the property? No. If so, attach a copy of said document to this application.

D. I HEREBY REQUEST A VARIANCE AS FOLLOWS:

(Please explain the hardship for which you are requesting a variance to alleviate.)

The existing section of E. Newaukum St. was constructed on the northern half of the road right of way. This project's frontage is on the southern half of the right of way. This project would have to fully construct the entire southern half of the road from the intersection. We are asking for a variance from curb, gutter and sidewalk and street lighting construction along the frontage and allow extension of the existing 17' road matching the recent construction approved for E. Newaukum St.

---

Your approval of the requested variance would permit me to use my property in the following manner:

---

Approval would allow the parcel to develop as a new 4-plex townhome development.

---

1. Would the strict application of the Zoning Regulations create practical difficulties or unnecessary hardships for you? (please explain)

Yes, due to the variance allotted to the developer on the north side of E. Newaukum St., the half street improvements would not line up. Our variance is to extend the extension half street improvement consistent with the previous development work.

2. Are there exceptional circumstances of conditions applicable to this property or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood? (Please explain).

Yes, the construction of required frontage half street would not align with the existing road.

3. Will the granting of a variance be significantly detrimental to the public welfare or injurious to the other property or improvements in your zone or neighborhood in which your property is located? (Please explain).

No, road and public utilities will be extended as required to provide fire and life safety access to the site.

---

[Signature]  
Signature of Applicant

Variance Fee: \$

790 S. Market Blvd, Chehalis 98532

Receipt. No. \_\_\_\_\_

Address

Date Paid \_\_\_\_\_

360-219-3978

Telephone

STATE OF WASHINGTON )

COUNTY OF Lewis )<sup>SS</sup>

On this 14<sup>th</sup> day of March, 20 22, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Kevin T. Klumpes being duly sworn, on his oath deposes and says that he prepared and read the foregoing statements and has acknowledged to me that the recitations contained therein are true, and has signed this instrument as his free and voluntary act and deed for the purposes therein mentioned.

Subscribed and sworn to before me this 14<sup>th</sup> day of March, 20 22

My Commission expires:

3-29-24

[Signature]

Notary Public in and for the State of Washington  
residing at Chehalis

[Signature]  
Community Development Director

5-25-2022  
Date

[Signature]  
Mayor

6-8-2022  
Date



## 12.04.060 - New residential sub-division streets.

- A. Establish street design for subdivisions of more than ten dwelling units on separate parcels, or multi-family dwelling units situated on a single parcel, and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable.
- B. Development of parcels shall be subject to minimum construction standards outlined in the WSDOT Standards.
- C. Development of parcels shall be required to resemble and match improvements on continuous parcels; i.e. sidewalks, culverts and driveways, curbs and gutters.
- D. Development of parcels parallel to Rush Road shall be allowed placement of a culvert and driveway.
- E. A new sub-division resembling developments such as Stadium Estates, Parkside Loop and Camden Yards shall be required to develop curbs and gutter and sidewalks when it creates a new neighborhood.
- F. Large sub-divisions consisting of ten tract or lots for single family dwelling or multi-family dwelling shall have a minimum thirty-foot right of way, twenty-foot paved surface, no parking allowed, or parking allowed on one side of the street, one sidewalk five feet in width, and one and one-half foot curb and gutter on both sides.
- G. Napavine City Council shall have the final authority to determine whether a development be required to install curbs and gutters, sidewalks and street lights and the city council may waive any other standard set forth herein as allowed by law. Provided however, a person must first exhaust administrative remedies prior to applying directly to the city council.

(Ord. No. 574, § 1, 1-23-18)

**15.06.050 - Fire access road requirements.**

A fire apparatus access road/fire lane can be a driveway, easement, public or private road that meets all the following requirements:

- A. Twenty-foot-wide unobstructed permanent all-weather driving surface with twenty-five-ton loading capacity.
- B. All portions of the exterior walls of residential structures must be within one hundred fifty feet from an approved fire apparatus access road/fire lane.
- C. Maximum grade of fifteen percent at all locations
- D. Vertical clearance of thirteen feet six inches.
- E. Minimum of twenty-foot inside turning radius and forty-foot outside turning radius at all bends and turns. A fire apparatus road/fire lane or driveway over one hundred fifty feet long is required to have an approved hammer head turn-around configuration. In some cases, a circular eighty-foot diameter turn-around may be acceptable.

(Ord. No. 608, § 1, 6-9-20)

2D ILLUMINATION

2D.01 General

New commercial or residential subdivisions, short plats or property development along the locations designated in Chapter 1 will provide streetlights in accordance with these Standards for such improvements of the city and they will be owned and operated by the city.

2D.02 Design Standards

A street lighting plan submitted by the applicant and approved by the Director of Public Works will be required for all streetlight installations. Type of installation will be as set forth in the most recent edition of WSDOT/APWA Standard Specifications, Illumination Standards Table in this chapter, and as directed by the city.

All public streetlights designs will be prepared by an engineering firm, licensed by the State of Washington, and capable of performing such work. All developments will submit the lighting plan on a separate plan sheet. After the system is completed and approved, a set of "as built" mylars will be submitted to the city as a permanent record.

Streetlights will be located in accordance with the design criteria contained herein, and as approved by the Director of Public Works. In addition, intersections will be illuminated to 1.5 times the highest foot-candle requirement of the streets surrounding the intersection. Exception: In residential and intermediate classes, local and collector streets intersecting other local and collector streets will not be subject to the 1.5 times illumination factor provided a luminaire is placed at the intersection. Energy efficient fixtures will be incorporated into the streetlight system whenever practical. Poles will be opposite across the roadway or on one side of the roadway. Staggered spacing will be allowed if the roadway width is such that adequate light levels cannot be provided with a one-sided or opposite/both-sided pattern.

For the purpose of this section, area classes are determined by zoning as follows:

**Commercial**

- Multi-family, high density
- Central business district
- Freeway commercial
- General commercial
- Neighborhood commercial

**Industrial**

- Heavy Industries
- Light Industries

**Intermediate**

- Essential public facilities
- Commercial office/mixed use

**Residential**

- Single Family, low density
- Single Family, medium density
- Multi-Family, medium density

As new zones are created, the Director of Public Works will classify them. The following criteria will be used to determine streetlight spacing:

AVERAGE MAINTAINED HORIZONTAL ILLUMINATION (FOOT CANDLES)				
Road Class	AREA CLASS			
	Residential	Intermediate	Industrial	Commercial
Local	0.2	0.6	N/A	N/A
Collector	0.5	0.7	0.8	0.9
Arterial	0.7	1.0	1.2	1.4
Boulevard	0.7	1.0	1.2	1.4

Uniformity ratio: 6:1 average: Minimum for local



4:1 average: Minimum for collector

3:1 average: Minimum for arterial and boulevard

Dirt Factor: 0.85

Lamp Lumen Depreciation Factor: 0.2 fc (except local residential street)

Line loss calculations will show no more than a 5 percent voltage drop, in any circuit from the source to the most distant luminaire. Branch circuits will serve a minimum of four (4) luminaires.

Pole foundations will be per Standards Drawing 2-16. Luminaire poles will conform to Section 9-29 of the WSDOT Standard Specifications, except as modified herein. Light standards will be tapered aluminum with satin ground finish. The diameter at the base of the pole will not exceed nine (9) inches and the minimum thickness of the pole will be ¼-inches. Mounting height will be 30 feet. Mast arms will be single bracket, taper, minimum ten (10) feet in length. The shaft will heat treated after welding on the based flange to produce T6 temper. The pole davit arm will be designated to support effective streetlight luminaires with a minimum weight of 60 pounds and a minimum effective protected area (EPA) of 1.5 square feet. Poles will be designed to withstand a 100mph (AASHTO) wind loading with a 1.3 gust factor with luminaire and mast arm attached, without permanent deformation or failure. Minimum wall thickness will be 0.188 inches. Poles will be equipped with a removable metal ornamental pole cap secured to the shaft with stainless steel screws. Poles will have a minimum 3 ½ by 6-inch hand hole, with cover, near the base and will be equipped with a grounding lug. The pole will also be equipped with a 120V, 20 AMP recessed weatherproof power receptacle, that meet all applicable guidelines and standards. The receptacle will be located thirteen (13) feet above the base of the pole.

All luminaires will be a medium cut off, IES Type II distribution and will comply with all standards as established by the Public Utility District No. 1 of Lewis County. Unless otherwise required by PUD No. 1, luminaires will be: 20 watt, catalog #GEMDCLZOS3A11GMC31.

All streetlight electrical installations including wiring conduits and power connections will be located underground.

New street lighting will be designed and installed in such a way as to blend with any utility pole-mounted lighting that may exist along the frontage of adjacent properties, but also to accommodate future integration of conforming streetlights along the roadway. To this end, when streetlight(s) are required along the entire frontage, as appropriate, to allow for the interconnection of future streetlight installations. This requirement may be waived with approval of the Director of Public Works, based on the site-specific conditions of the property in question.

Alternate streetlight designs may be allowed or required by the city to accommodate the unique characteristics of a particular street or neighborhood. For example, special lighting may be deemed appropriate along a street that is part of a designated Historic District. The use of any alternate street lighting must be approved in writing by the Director of Public Works.

The General Notes on the following pages will be included on any plans dealing with streetlight design, in addition to all other applicable requirements.

## General Notes (Street Light Construction)

1. All workmanship, materials and testing will be in accordance with WSDOT/APWA, MUTCD, NEC or City of Napavine Public Works Standards unless otherwise specified below. In cases of conflict, the most stringent guidelines will apply.
2. Washington State electrical permits and inspections are required for all street lighting installations within the City of Napavine. The contractor is responsible for obtaining said permits **prior** to any type of actual construction.
3. A clearly marked service disconnect will be provided for every lighting circuit. The location and installation of the disconnect will conform to Nation Electrical Code (NEC) and these Standards. The photo controls window will face north unless otherwise. The service disconnect will not be mounted on the luminaire pole. The service disconnect will be of a tyle equal to a Milbank CP3B-11115 AALSP2 service, 120/240 VAC, 10/3W, Caltrans Type 3B with contractors, photo controls and test switch. All service disconnects will be used to fullest capacity, i.e., maximum number of luminaires per circuit.
4. All lighting wire will be copper with a minimum size of #8. All wire will be suitable for wet locations. All wire will be installed in schedule 80 PVC conduit with a minimum of 1 ¼ inches. A bushing or bell-end will be used at the end of a conduit that terminates at a junction box or luminaire pole. Conductor identification will be an integral part of the insulation of the conductors will be #8 copper. All splices or taps will be made by approved methods utilizing epoxy kits rated at 600 volts, minimum (i.e., 3-M 82-A2). All splices will be made with pressure type connectors (wire nuts will not be allowed). Direct burial wire will not be allowed. All other installation will conform to NEC, WSDOT/APWA and MUTCD standards.
5. Each luminaire pole will have an in-line, fused, watertight electrical disconnect located at the base of the pole. Access to these fused disconnects will be through the hand-hole on the pole. The hand-hole will be facing away from on-coming traffic. Additional conductor length will be left inside the pole and pull or junction box equal to a loop having a diameter of one foot. Load side of in-line fuse to luminaire head will be cable and pole bracket wire, 2 conductor, 19-strand copper, #10 and will be supported at the end of the luminaire arm by an approved means. Fuse size, disconnect installation and grounding in pole will conform to NEC standards.
6. Approve pull boxes or junction boxes will be installed when conduit runs are more than 200 feet. In addition, pull box or junction box will be located within 10 feet of each luminaire pole and at every road crossing. Boxes will be clearly and indelibly marked as lighting boxes by the legend, "L.T." or "LIGHTING". See WSDOT Standard Plan J-11a.
7. All lighting poles will have tapered round shafts with a linear taper of between 0.125 and 0.14 inches per foot. In existing developed areas, the city may require a specific pole type to maintain consistency within the developed area.
8. Cement concrete bases will follow WSDOT Standard Plan J-1b, Sheet 1, Foundation Detail. Conduit will extend between three (3) and six (6) inches above the concrete base.
9. All streetlights will include a recessed 120V weatherproof receptacle that meets all applicable guidelines and standards. The receptacle will be located thirteen (13) feet above the base of the pole.
10. Ann modification to approved plans will be reviewed and approved by the Director of Public Works **prior** to installation.

## 2B STREETS

### 2B.01 General

City streets are classified as arterials, collectors, and local access streets in accordance with regional transportation needs and the functional use each serves. Function is the controlling element for classification and will govern right-of-way, street width, and street geometries. The Director of Public Works will determine the classification of new streets.

Street design must provide for the maximum loading conditions anticipated. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity. See Table I, *Minimum Street Standards*.

### 2B.02 Design Standards

The design of streets and roads will depend upon their type and usage. The design elements of city streets will conform to the Standards as set forth herein and current design practices as set forth in Chapter 1.

The layout of streets will provide for the continuation of existing principal streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided. Minor streets, which service primarily to provide access to abutting property, will be designed to discourage through traffic. See Table I, *Minimum Street Standards*.

Table I – Minimum Street Standards

DESIGN STANDARDS	BOULEVARD	MAJOR OR MINOR ARTERIAL	COMMERCIAL COLLECTOR	NEIGHBORHOOD COLLECTOR	LOCAL ACCESS	PRIVATE
DESIGN LIMITATIONS	Access and intersections should be limited. No on-street parking		N/A	N/A	N/A	N/A
MINIMAL STRUCTURAL DESIGN	See Standard Drawing Number 2-2					
STANDARD RIGHT-OF-WAY	90' – 102'	84' – 104'	66' – 78'	60'	60'	N/A
STANDARD PAVEMENT WIDTH	48' (may have a 16' median)	48' – 60'	40'	28' – 40'	36'	20'
PARKING LANE	None Allowed	None Allowed	8' Both Sides	7' One Side	7' One Side	N/A
MINIMUM MAXIMUM GRADE	0.5% - 8.0%	0.5% - 8.0%	0.5% - 10.0%	0.5% - 12.0%	0.5% - 15.0%	0.5% - 15.0%
CURBS	Both Sides					N/A
SIDEWALKS	Both Sides 6' (min) 8' – pedestrian corridor 10' – zero lot setback			Both Sides 5'	Both Sides 5'	One Side 5'
CUL-DE-SAC RADIUS (PAVEMENT WIDTH)	N/A	N/A	50' (on industrial street only)	N/A	47' with landscape island and island radius of 17'	Fire Department Standards
INTERSECTION CURB RADIUS	35'	35'	35'	35'	25'	25'
DESIGN SPEED (MPH)	40	40	30	30	25	N/A
MINIMUM CENTERLINE RADIUS	w/ superelevation per AASHTO  w/o superelevation 800'	w/ superelevation per AASHTO  w/o superelevation 600'	150'	150'	100'	N/A
<i>*Maximum superelevation – 6%</i>						

- A. **Alignment** of major arterials, minor arterials and collectors will conform as nearly as possible with that shown in the Comprehensive Plan.
- B. **Grade.** Street grade should conform closely to the natural contour of the land. In some cases, the Director of Public Works may require a different grade. The minimum allowable grade will be 0.5 percent. The maximum allowable grade will be 8 – 15 percent depending on the street classification.
- C. **Width.** The pavement and right-of-way width will depend on the street classification. Table I, *Minimum Street Standards*, shows the minimum widths allowed.

The General Notes on the following page will be included on any plans dealing with street design in addition to all other applicable requirements.

### General Notes (Street Construction)

1. All workmanship and materials will be in accordance with the City of Napavine Standards and the most recent edition of the State of Washington Standard Specification for Road, Bridge, and Municipal Construction.
2. The contractor will be responsible for all traffic control in accordance with MUTCD. **Prior** to disruption of any traffic, traffic control plans must be prepared and submitted to the city for approval. No work will commence until all approved traffic control plans are in place.
3. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment, will be staked by an engineering or surveying firm capable of performing such work.
4. Where new asphalt joins existing, the existing asphalt will be cut to a neat vertical edge and tacked with Asphalt Emulsion type CSS-1 in accordance with the Standard Specifications. The new asphalt will be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grad AR-4000W paving asphalt.
5. Compaction of subgrade, rock and asphalt will be in accordance with the Standard Specification.
6. Form and subgrade inspection by the Public Works Department is required **before** pouring concrete. Twenty-four hours (one workday) **advance** notice is required for form inspection.
7. Testing and sampling frequencies are described in the Standards.
8. The Public Works Department will install or oversee the installation of street name and regulatory signs at the contractor's and/or the developer's expense. All street name and regulatory signs will be requested and approved by the city **prior** to the start of construction.

#### 2B.04 Signing and Striping

Street signs are defined as any regulatory, warning, or guide signs. The developer is responsible for the cost of all street signs. Street signs will comply with the latest edition of the *U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD)*.

Pavement markings and street signs, including poles and hardware, will be paid for by the developer, but will be designed, furnished and installed by the city or by the developer under the city's direction to establish and maintain uniformity. The Public Works Department will determine whether pavement markings and street signs will be provided by the city or by the developer. If the work is to be performed by the city, the developer must submit a written request to Public Works and the developer will then be billed upon completion of the work.

#### 2B.05 Right-of-Way

Right-of-way is determined by the functional classification of a street. Refer to Table I, *Minimum Street Standards*.

Right-of-Way requirements may be increased if additional lanes, pockets, transit lanes, but loading zones, operational speed, bike lanes, utilities, or other factors are required as determined by the Director of Public Works.

Right-of-way will be conveyed to the city on a recorded plat or by a right-of-way dedication deed.

#### 2B.06 Private Streets

A. Private streets may be allowed under the following conditions:

1. Permanently established by tract or lot providing legal access to serve not more than eight (8) dwelling units or businesses on separate parcels, or unlimited dwelling units or businesses situated on a single parcel and sufficient to accommodate required improvements to include provisions for future use by adjacent property owners when applicable; and
2. Have a minimum 20-foot paved surface and a sidewalk five (5) feet in width of such a design that prevents parking on the sidewalk; and
3. Accessible at all times for emergency and public service vehicle use; and
4. Will not result in the land-locking of present or future parcels not obstruct public street circulation; and
5. Covenants have been approved, recorded, and verified with the city that provide for maintenance of the private streets and associated parking areas by the owner or homeowners association or other legal entity.

B. Acceptance as Public Street. Acceptance of private streets as public streets will be considered only if provision is made for the street(s) to meet all applicable public street standards, including right-of-way widths.

#### 2B.07 Street Frontage Improvements

A. All commercial and residential (including multi-family) development, plats, and short plats will install street frontage improvements at the time of construction as required by the Public Works Department. Such improvements may include curb and gutter; sidewalk; street storm drainage; street lighting system; traffic signal modification, relocation or installation; utility relocation; landscaping

and irrigation; and street widening per these Standards. Plans will be prepared and signed by a licensed civil engineer registered in the State of Washington.

- B. All frontage improvements will be made across full frontage of property and on all sides that may border a city right-of-way.
- C. Exceptions. See Chapter 1, Section 1.07 "Exceptions".

2B.08 Cul-de-sac

Streets designed to have one end permanently closed will be no longer than 400 feet. At the closed end, there will be a widened "bulb" having a minimum paved traveled radius as shown in Table 1, Minimum Street Standards.

2B.10 Medians

A median will be in addition to, not part of the specified roadway width except on a road classed as a Boulevard. Medians will be designed so as not to limit turning radius or sight distance at intersections. Landscaping and irrigation will be installed when directed by the Director of Public Works.

2B.11 Intersections

- A. Traffic control will be as specified in the most recent edition of the MUTCD or as modified by the Director of Public Works as a result of appropriate traffic engineering studies.
- B. Street intersections will be laid out to intersect as nearly as possible at right angles. Sharp angled intersections will be avoided. For reasons of traffic safety, a "T" intersection (three-legged) is preferable to the crossroad (four-legged) intersection for local access streets. For safe design, the following types of intersections features should be avoided:
  - 1. Intersections with more than four intersecting streets
  - 2. "Y" type intersections where streets meet at acute angles
  - 3. Intersections adjacent to bridges and other sight obstructions
  - 4. Offset intersections that are not conducive to side traffic flow

In no case will the angle of the intersection be less than 60 degrees nor greater than 120 degrees. The preferred angle is 90 degrees.

- C. Spacing between adjacent intersecting streets, whether crossing or "T", should be as follows:

When the highest classification involved is:	Minimum centerline offset should be:
Major Arterial	350 Feet
Minor Arterial	300 Feet
Commercial Collector	200 Feet
Neighborhood Collector	200 Feet
Local Access	150 Feet

When different classes of streets intersect, the higher standard will apply on curb radii. Deviations may be allowed at the discretion of the Director of Public Works.

- D. On sloping approaches at an intersection, landings will be provided with a grade not to exceed a one-foot difference in elevation for a distance of 300 feet approaching any arterial, or 20 feet approaching

1. Provide paved walkways with a hard all-weather surface linking various sections of subdivisions and developments to peripheral streets with bus stops.
2. Provide access ramps and other facilities consistent with barrier-free design standards along walkways leading to bus stops.
3. Separate roads and parking areas from pedestrian pathways by grade separations, landscaping, and other devices. A minimum four (4) to six (6) foot planting strip will be provided to buffer sidewalks or walkways from streets and parking areas around bus stops and shelters.
4. Provide pedestrian-friendly features such as lighting, signs, and trash receptacles as warranted by anticipated use.
5. New development street systems should be designed to minimize pedestrian travel to bus stops.

#### 2F.07 Mailboxes

During construction, existing mailboxes will be accessible for the delivery of mail or, if necessary, moved to a temporary location. Temporary relocations will be coordinated with the U.S. Postal Service. The mailboxes will be reinstalled at the original location or, if construction has made it impossible, to a location as outlined below and approved by the U.S. Postal Service. Kiosk for 3 units or more.

##### Location:

1. Bottom or base of box will be 36 to 42 inches above the road surface.
2. Front of mailbox will be 18 inches behind vertical curb face or outside edge of shoulder.
3. New developments. Clustered mailboxes are required (contact the U.S. Postal Service for details). Refer to Standard Drawings 2-18.
4. Mailboxes will be set on posts strong enough to give firm support, not to exceed 4 x 4 inches wood or one 1-1/2-inch diameter pipe, or a material and design with comparable breakaway characteristics.

#### 2F.08 Guard Rails

For purposes of design and location, all guardrails along roadways will conform to the criteria of the Department of Transportation Design Manual, as may be amended or revised.

#### 2F.09 Retaining Walls

- A. **General.** Rock walls may be used for erosion protection of cut or fill embankments up to a maximum height of eight (8) feet in stable soil conditions that will result in no significant foundation settlement or outward thrust upon the walls. For heights over six (6) feet or when soil is unstable, structural wall of acceptable design stamped by a licensed structural engineer will be used.

In the absence of such a rock wall design, walls having heights over six (6) feet or walls constructed in conditions where soil is unstable are required to be a pre-engineered structural wall having a design approved by the Public Works Department (or the Community Development Director if outside the right-of-way). Structural walls will be designed by professional engineer, licensed in the State of