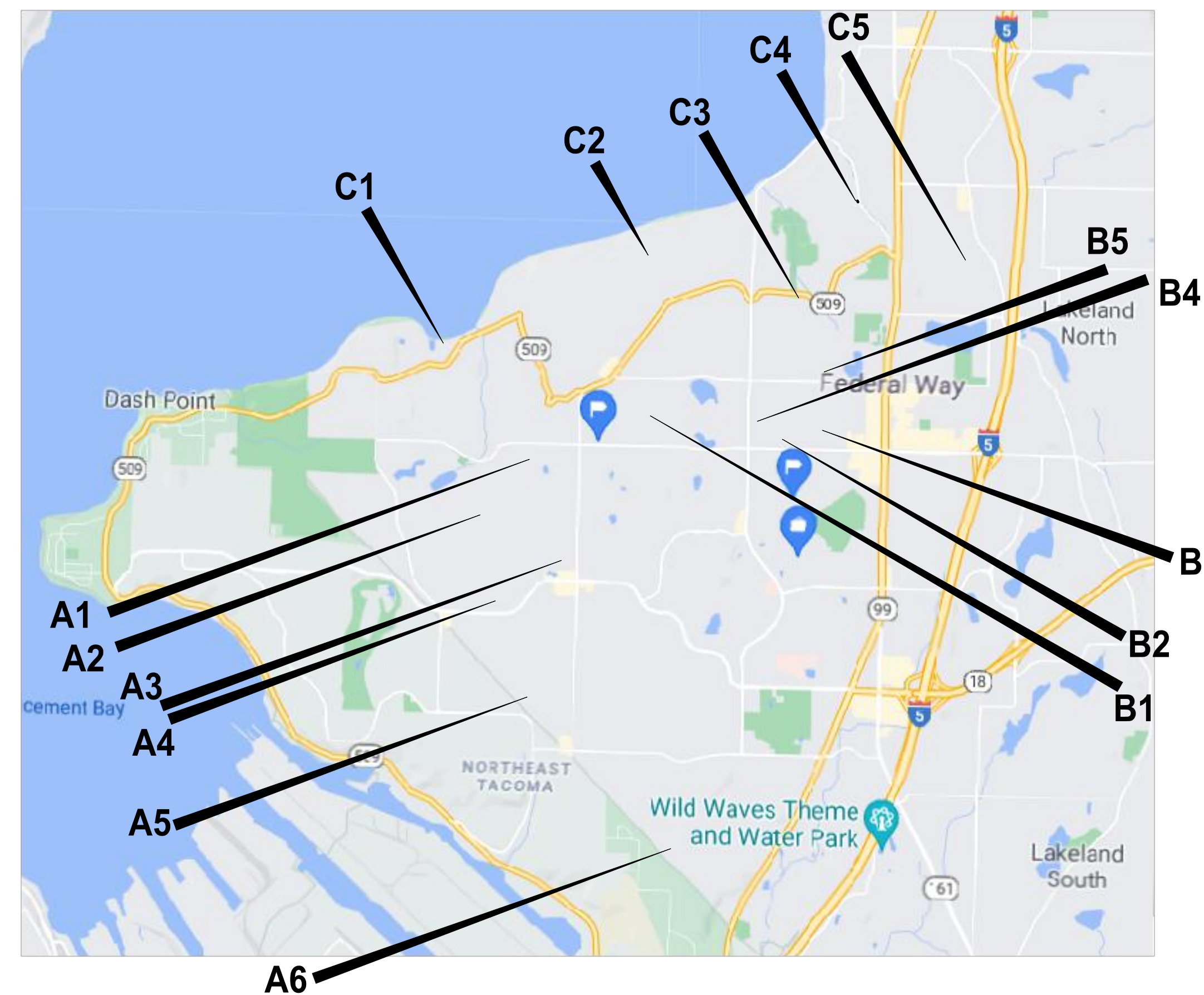


City of Federal Way Public Works Department 2022 STORM PIPE REPAIR

July 2022
RFB NUMBER 22-008



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APPROVED FOR CONSTRUCTION
Desiree S. Winkler 7-24-22
 DESIREE S. WINKLER P.E. DATE
 DEPUTY PUBLIC WORKS DIRECTOR

100% DRAWINGS



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 DESIGNED: J. COLE
 REVIEWED: C. MULLEN
 APPROVED: D. WINKLER



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2022 STORM PIPE REPAIR

COVER SHEET

CITY PROJECT #:
34288

SHEET
COVER

1 OF 23

K:\engineering\division\PROJECTS\ACTIVE\34288 - 2022 storm pipe repair phase 4\03 PE\ACAD\288_2021_Sch.A-E Plus.dwg, 6/24/2022

ESC NOTES

- ESC MEASURES MUST BE INSTALLED AND PROPERLY FUNCTIONING PRIOR TO OR IN CONJUNCTION WITH ALL EXCAVATION SO AS TO ENSURE THAT TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
- ESC MEASURES SHOWN ON THIS PLAN, IF ANY, ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION, THESE ESC MEASURES SHALL BE UPGRADED AS NEEDED AT NO ADDITIONAL COST TO THE CITY FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION.
- ESC FACILITIES SHALL BE INSPECTED DAILY BY CONTRACTOR'S ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
- ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING WET SEASON OR SEVEN DAYS DURING DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH APPROVED ESC METHODS.
- ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
- AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCHBASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO DOWNSTREAM SYSTEM.
- PRIOR TO BEGINNING OF WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF BEGINNING OF WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO ENGINEER.
- INSTALL INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00 ON ALL STORM DRAIN INLETS NEAR CONSTRUCTION SITE THAT MAY CATCH RUNOFF FROM CONSTRUCTION SITE.
- PLUG STORM DRAIN PIPE DOWNSTREAM OF CONSTRUCTION SITE. DIRECT SURFACE RUNOFF AWAY FROM CONSTRUCTION SITE.
- SCHEDULE C HAVE OUTFALLS IN CLOSE PROXIMITY TO REPAIR.
- UPSTREAM STRUCTURE WILL BE PLUGGED AND HAVE DEWATERING SYTEMS ON SITE AT ALL TIMES THAT IS CAPABLE OF DIVERTING STORMWATER AROUND CONSTRUCTION ZONE.
- ONCE REPAIR HAS BEEN MADE, THE DOWNSTREAM STRUCTURE SHALL BE PLUGGED AND THE PIPE SHALL BE CLEARED OF ANY DEBRIS AND SEDIMENT THAT ACCUMULATED DURING CONSTRUCTION.



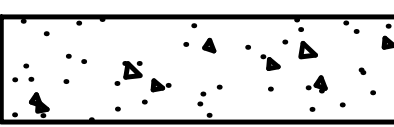
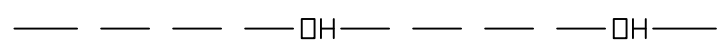


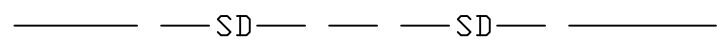


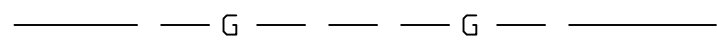


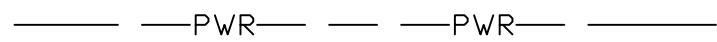
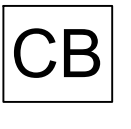

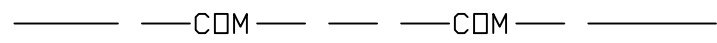
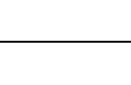



ABBREVIATIONS

ACP	ASPHALT CONCRETE PAVEMENT
AC	ASBESTOS CONCRETE
CB	CATCH BASIN
COFW	CITY OF FEDERAL WAY
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CSTC	CRUSHED SURFACE TOP COURSE
DIA	DIAMETER
ESC	EROSION SEDIMENTATION CONTROL
EXIST.	EXISTING
G	UNDERGROUND GAS
HDPE	HIGH DENSITY POLY ETHYLENE
HMA	HOT MIX ASPHALT
NTS	NOT TO SCALE
OH	OVERHEAD LINE
PWR	UNDERGROUND POWER
SD	STORM DRAIN
SS	SANITARY SEWER
TEL	UNDERGROUND TELEPHONE
W	WATER

GENERAL NOTES

- UNLESS OTHERWISE NOTED ON THE PLAN, CONTRACTOR SHALL REBUILD, REPAIR, RESTORE, AND MAKE GOOD ALL DAMAGES AND DISTURBANCES TO ANY AND ALL IMPROVEMENTS THAT EXIST PRIOR TO THE CONSTRUCTION TO THEIR ORIGINAL CONDITIONS. THE EXTENT OF SURFACE DISTURBANCE MAY VARY DEPENDING ON CONTRACTOR'S CHOSEN CONSTRUCTION METHOD. BIDDERS ARE ENCOURAGED TO INSPECT THE SITE CONDITIONS BEFORE SUBMITTING BIDS.
- SEEDING IS NOT AN ALLOWED METHOD FOR RESTORING DISTURBED LAWN. CONTRACTOR SHALL EITHER INSTALL NEW SOD, OR REMOVE, PRESERVE AND REUSE EXISTING SOD TO RESTORE DISTURBED LAWN. ENGINEER'S REVIEW AND APPROVAL OF THE CONDITIONS OF PRESERVED SOD IS REQUIRED PRIOR TO REUSING EXISTING SOD. IF PRESERVED SOD IS NOT APPROVED, NEW SOD SHALL BE USED.
- TRENCH OPEN AREA MUST BE COVERED WITH COLD MIX ASPHALT TEMPORARY PAVEMENT NO LATER THAN NEXT CALENDAR DAY AFTER TRENCH BACKFILL IS COMPLETE AND BEFORE OPEN TO TRAFFIC, WHICHEVER COMES FIRST. COLD MIX SHALL BE PLACED IN A 2-INCH MINIMUM THICKNESS. MAINTAIN AND/OR REPLACE COLD MIX AS NECESSARY AT ENGINEER'S DISCRETION.
- THE CONTRACTOR MAY TEMPORARILY RESTORE SITES WITH COLD MIX ASPHALT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT TEMPORARY PAVEMENT IS PROPERLY MAINTAINED. PERMANENT PAVEMENT RESTORATION MAY BE COMPLETED FOR AN ENTIRE SCHEDULE AT ONCE, RATHER THAN AS EACH INDIVIDUAL SITE IS COMPLETED AS LONG AS TEMPORARY RESTORATION IS PROPERLY MAINTAINED AND THERE ARE NO OTHER ISSUES.
- BACKFILL COMPACTION AND PLACEMENT WILL BE PERFORMED IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATIONS. ALL PERPENDICULAR CROSSINGS OF THE ROADWAY WILL BE BACKFILLED 100% WITH CSBC. THE ASPHALT SECTION SHALL BE RESTORED WITH A MINIMUM OF THREE (3") INCHES OF ASPHALT, HMA 1/2", OR BE REPLACED TO THE ORIGINAL CONDITION IF THICKER, AT THE CITY'S SOLE DISCRETION. PER COFW STANDARD 3-28.
- AERIAL PHOTOGRAPHS WERE TAKEN IN 2015. CURRENT CONDITIONS MAY DIFFER. PROPERTY AND RIGHT-OF-WAY LINES ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
- CONTRACTOR SHALL INVESTIGATE PROJECT SITE AND BID THE PROJECT BASED ON CURRENT SITE CONDITIONS.
- PIPE LOCATION, LENGTH, DEPTH AND DIAMETER ARE APPROXIMATE ESTIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY THE INFORMATION PRIOR TO WORK.
- PIPE MATERIAL TYPE CHANGE COULD OCCUR WITHIN SOME PIPES AS A RESULT OF REPLACING FAILED PIPE SEGMENTS IN THE PAST. CONTRACTOR TO VERIFY.
- GROUNDWATER BASE FLOW WILL LIKELY EXIST IN SOME PIPES DURING CONSTRUCTION. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO BYPASS BASE FLOW PRIOR TO WORK.
- DEWATERING SYSTEMS, PROVIDED BY THE CONTRACTOR SHALL BE ONSITE AND AVAILABLE.
- ACCESS TO SOME PIPES CAN BE DIFFICULT. CONTRACTOR SHALL BID THE PROJECT AFTER CAREFULLY EXAMINING THE EXISTING CONDITIONS.
- NOT ALL EXISTING UTILITIES ARE SHOWN ON PLAN. CONTRACTOR SHALL INSPECT SITE AND CONTACT UTILITY OWNERS/OPERATORS TO DETERMINE UTILITY LOCATIONS WHERE NECESSARY.
- THE CONTRACTOR SHALL CLEAN AND CAMERA THE REPAIRED PIPE TO ENSURE REPAIR WAS COMPLETED CORRECTLY AND THERE IS NOT DEBRIS OR SEDIMENT PRESENT.
- UPSTREAM STRUCTURE WILL BE PLUGGED AND HAVE DEWATERING SYTEMS ON SITE AT ALL TIMES THAT IS CAPABLE OF DIVERTING STORMWATER AROUND CONSTRUCTION ZONE.
- ONCE REPAIR HAS BEEN MADE, THE DOWNSTREAM STRUCTURE SHALL BE PLUGGED AND THE PIPE SHALL BE CLEARED OF ANY DEBRIS AND SEDIMENT THAT ACCUMULATED DURING CONSTRUCTION.
- CONTRACTOR SHALL CONFIRM INSTALLED LENGTH OF PIPE WITH CITY OF FEDERAL WAY INSPECTOR ONSITE PRIOR TO FINAL BACKFILL OF TRENCH.
- CONTRACTOR SHALL ENSURE MAIL AND REFUSE SERVICE IS NOT INTERRUPTED DURING CONSTRUCTION AND SHALL COORDINATE WITH SERVICE PROVIDER ON DELIVERY/PICKUP TIME.
- IF CONTRACTOR IS UNABLE TO COMPLETE THE PERMANENT PIPE REPAIR WITHIN THE ALLOWABLE WORKING HOURS AND WEATHER IS EXPECTED, THE CONTRACTOR SHALL INSTALL TEMPORARY PIPE AND PIPE CONNECTIONS IN ALL OPEN EXCAVATION INCLUDING DITCHES, TRENCHES, SWALES, HOLES PER THE CITIES DIRECTION.

LEGEND

	STORM PIPE TO BE REPAIRED		SANITARY SEWER PIPE		CONCRETE
	OVERHEAD LINES		WATER MAIN		ASPHALT
	STORM PIPE		ROW/PL LINES		CLEAR AND GRUB
	GAS MAIN		SANITARY MANHOLE		EASEMENT
	BURIED ELECTRICAL		EXISTING STORM CATCH BASIN		OUTLET PROTECTION
	BURIED COMMUNICATION CABLE		END OF PIPE		
	FLOW DIRECTION		CB INLET PROTECTION		
	OUT FALL				

100% DRAWINGS



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 DESIGNED: J. COLE
 REVIEWED: C. MULLEN
 APPROVED: D. WINKLER

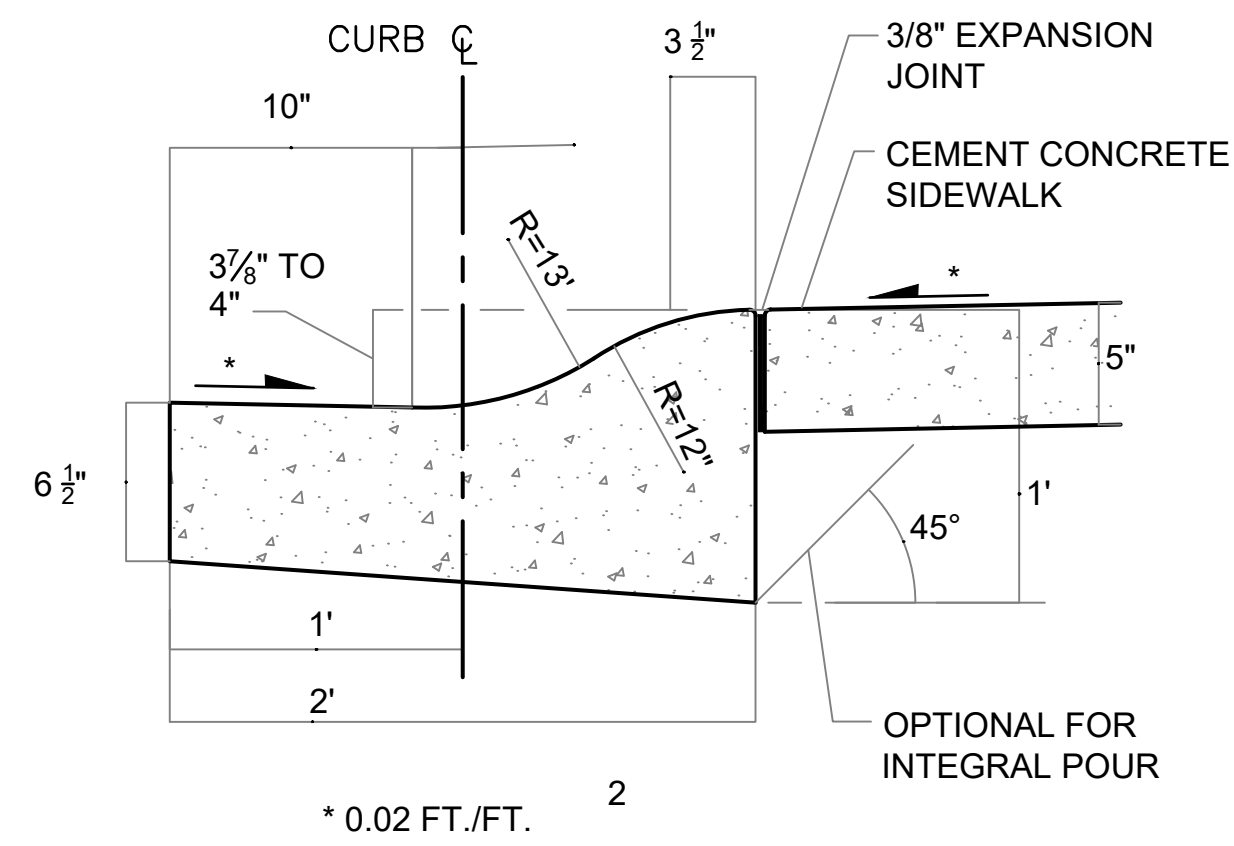


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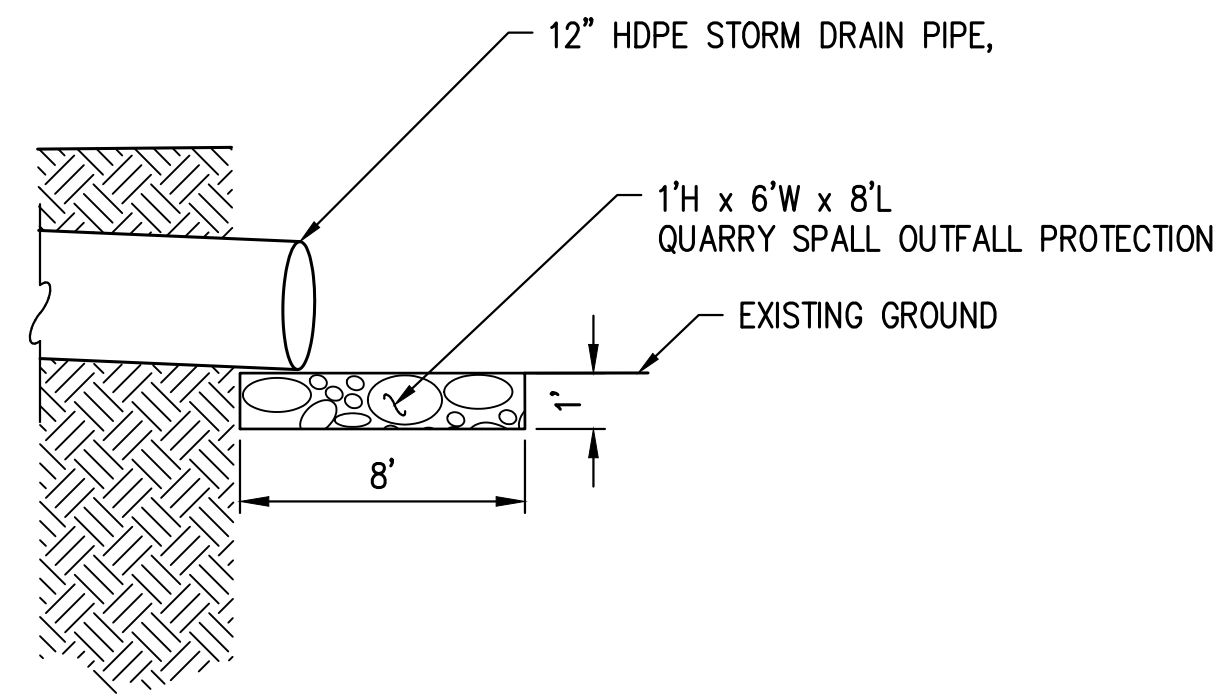
**2022 STORM PIPE REPAIR
 GENERAL NOTES AND LEGEND**

CITY PROJECT #:
34288
 SHEET
NOTES
 2 OF 23

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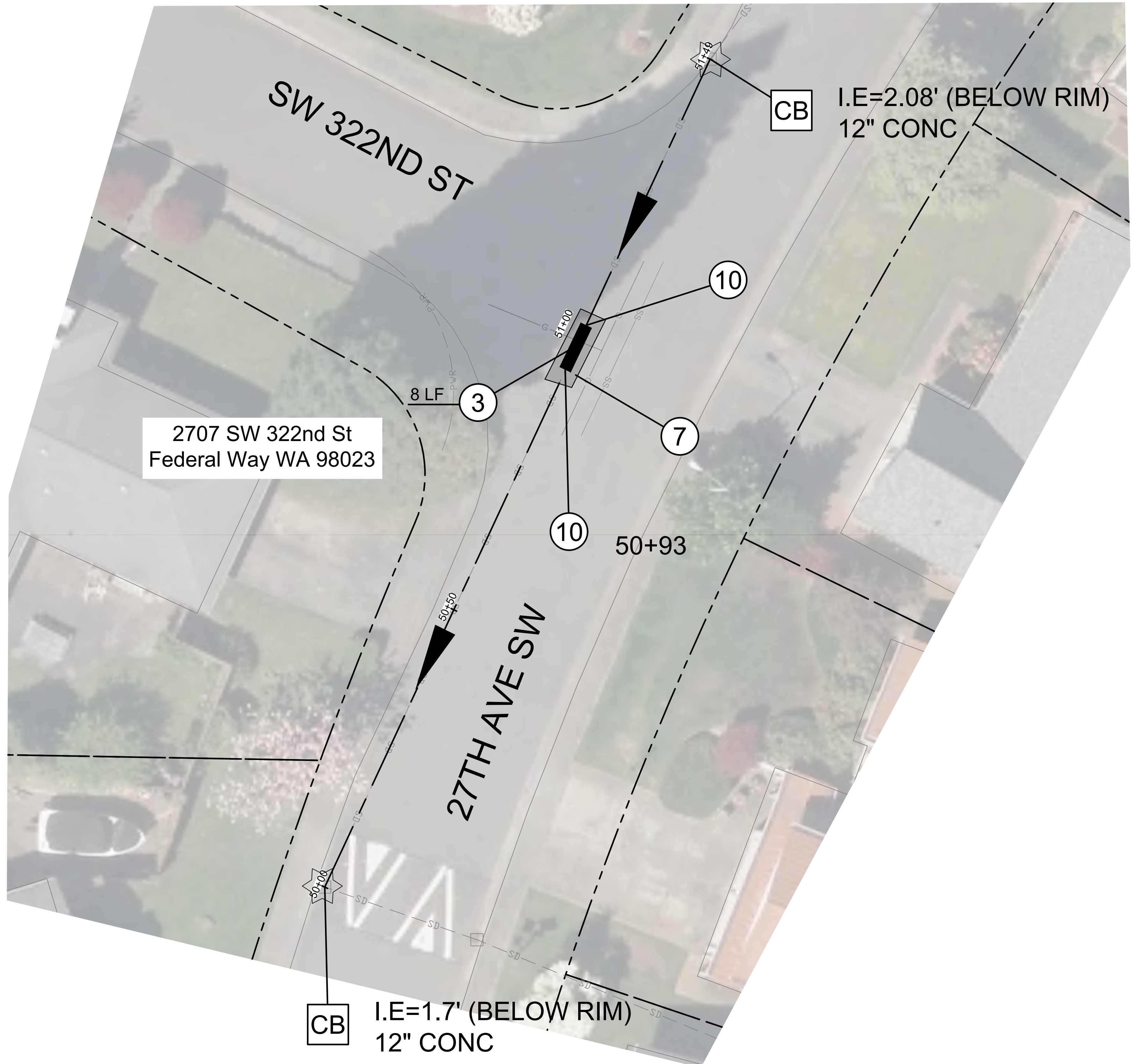
CEMENT CONCRETE ROLLED CURB AND GUTTER



OUTFALL DETAIL

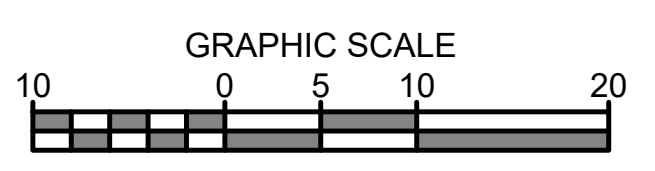
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NO.	DATE	REVISION



- CONSTRUCTION NOTES**
- ③ REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH DUCTILE IRON STORM SEWER PIPE, 12 IN. DIA.
 - ⑦ HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
 - ⑩ CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT

- GENERAL NOTES**
1. REPLACE CURB & GUTTER FROM JOINT TO JOINT.
 2. BACKFILL TRENCHES WITH CSTC.



UTILITIES AS SHOWN ARE APPROXIMATE.

100% DRAWINGS

CITY OF Federal Way
Centered on Opportunity
33325 8TH AVE S FEDERAL WAY, WA 98003
PHONE: (253) 835-2700
WWW.CITYOFFEDERALWAY.COM

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

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DESIGNED: J. COLE
REVIEWED: C. MULLEN
APPROVED: D. WINKLER



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NO.	DATE	REVISION

2022 STORM PIPE REPAIR
SITE PLAN: 2707 SW 322ND ST
(PIPE #3251)

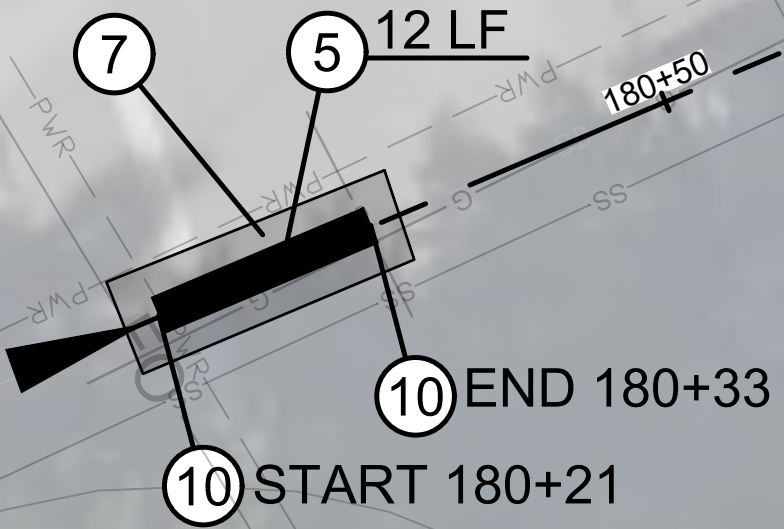
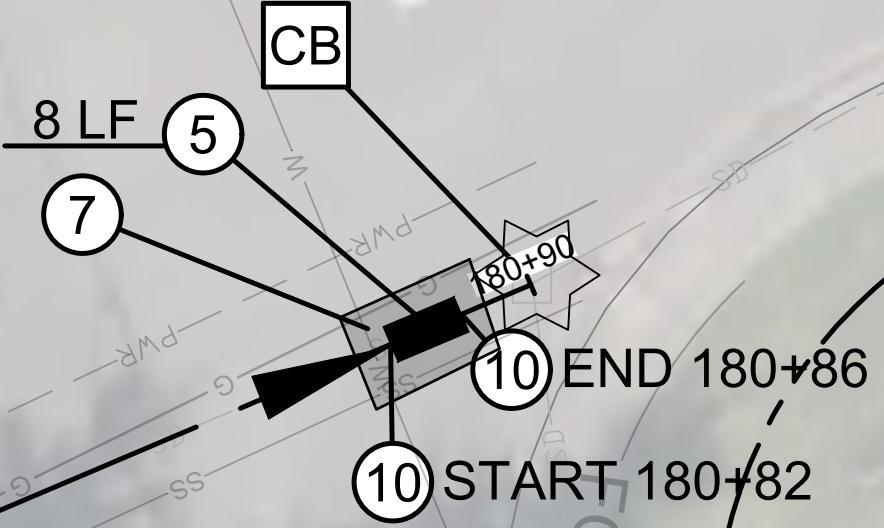
CITY PROJECT #:
34288
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A1
4 OF 23

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32807 35th Ave SW
Federal Way WA 98023

I.E=4.5' (BELOW RIM)
15" CONCRETE PIPE

I.E=3.42' (BELOW RIM)
15" CONCRETE PIPE



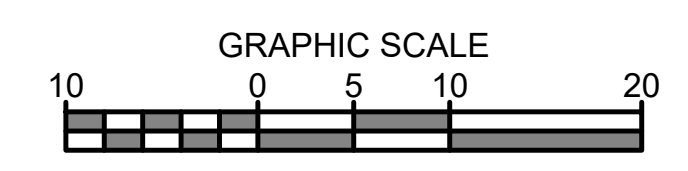
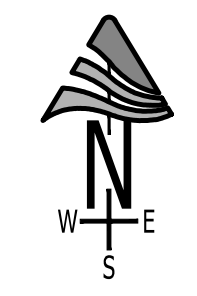
33005 35th Ave SW
Federal Way WA 98023

SW 330TH ST

35TH AVE SW

- CONSTRUCTION NOTES**
- 5 REMOVE EXISTING DAMAGED CONC. PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 15 IN. DIA.
 - 7 HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
 - 10 CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT

- GENERAL NOTES**
1. REPLACE CURB & GUTTER FROM JOINT TO JOINT.
 2. BACKFILL TRENCHES WITH CSTC.



UTILITIES AS SHOWN ARE APPROXIMATE.

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2022 STORM PIPE REPAIR
SITE PLAN: 33005 35TH AVE SW
(PIPE #2307)

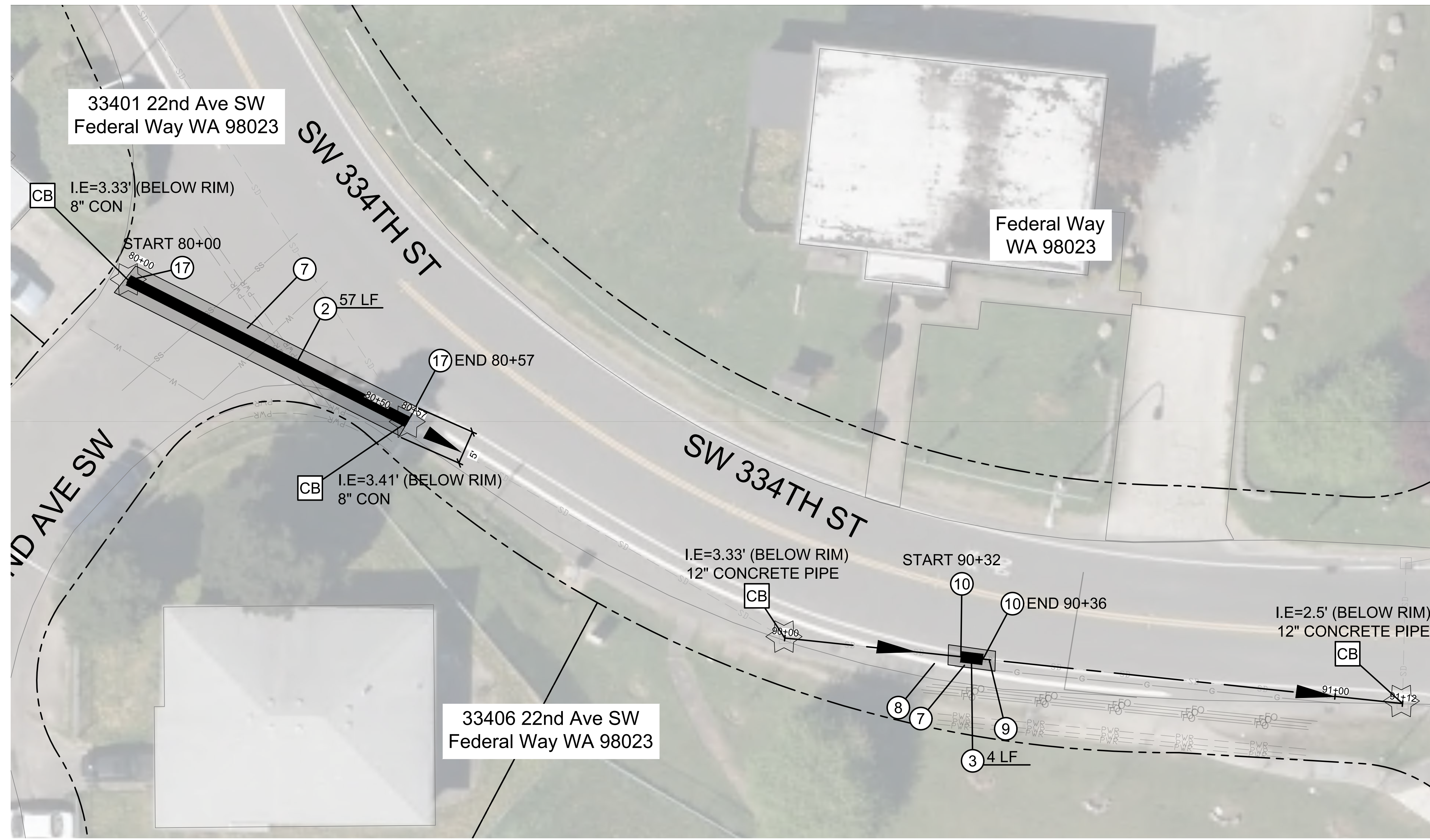
CITY PROJECT #:
34288

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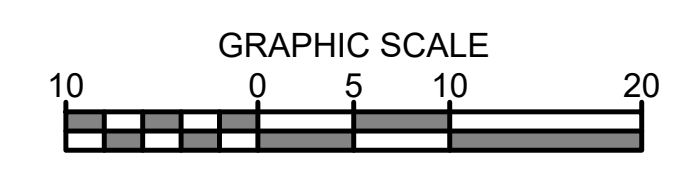
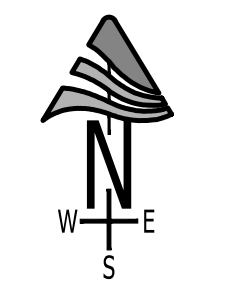
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- CONSTRUCTION NOTES**
- ② REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 8 IN. DIA.
 - ③ REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH DUCTILE IRON STORM SEWER PIPE, 12 IN. DIA.
 - ⑦ HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
 - ⑧ MOUNTABLE CEMENT CONC. CURB
 - ⑨ PAINT LINE
 - ⑩ CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
 - ⑰ CONNECTION TO DRAINAGE STRUCTURE

- GENERAL NOTES**
- 1. REPLACE CURB & GUTTER FROM JOINT TO JOINT.
 - 2. BACKFILL TRENCHES WITH CSTC.



UTILITIES AS SHOWN ARE APPROXIMATE.

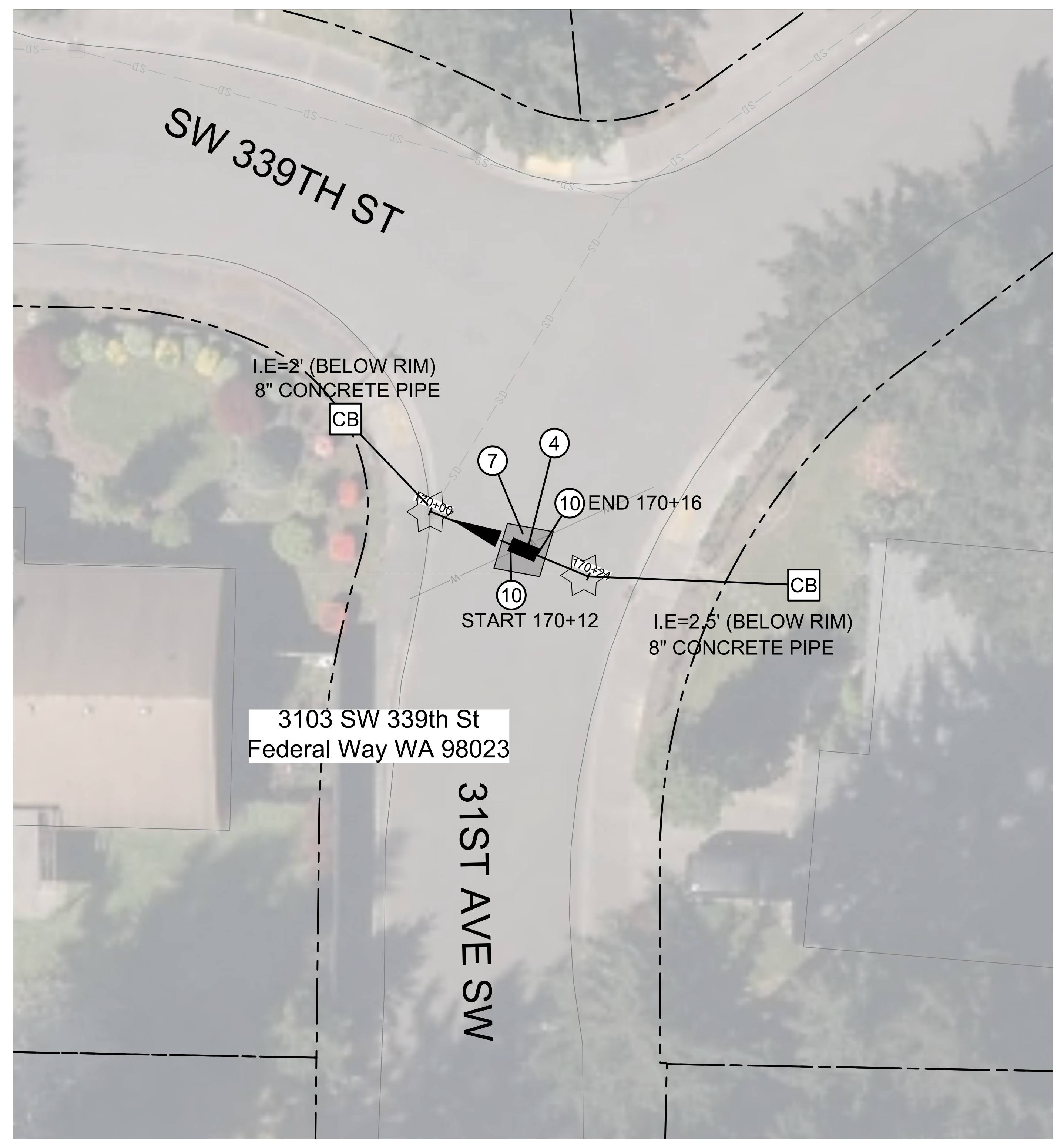
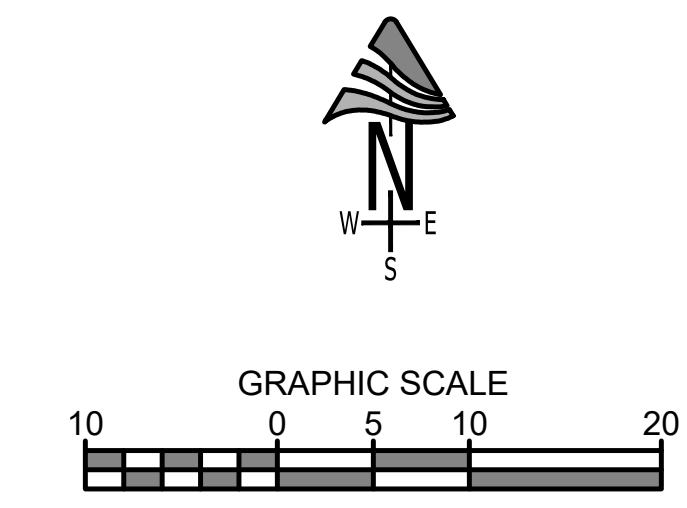
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2022 STORM PIPE REPAIR
SITE PLAN: 33406 22ND AVE SW
(PIPE #16767)

CITY PROJECT #:
34288
 SHEET
A3
 6 OF 23



3103 SW 339th St
Federal Way WA 98023

UTILITIES AS SHOWN ARE APPROXIMATE.

CONSTRUCTION NOTES	
④	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH DUCTILE IRON STORM SEWER PIPE, 8 IN. DIA.
⑦	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
⑩	CONNECT TO EXISTING PIPE WITH FERSCO COUPLER OR APPROVED EQUIVALENT

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.

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2022 STORM PIPE REPAIR
SITE PLAN: 3103 SW 339TH ST
(PIPE #1192)

CITY PROJECT #:	34288
SHEET	A4
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34811 27th Ave SW
Federal Way WA 98023

2702 SW 349th Pl
Federal Way WA 98023

27TH AVE SW

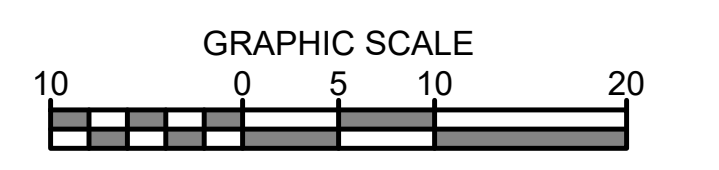
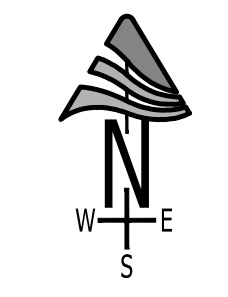
END 40+94
START 40+90

I.E=4.16' (BELOW RIM)
15" CMP

CB

SW 349TH PL

UTILITIES AS SHOWN ARE APPROXIMATE.



CONSTRUCTION NOTES

- ⑤ REMOVE EXISTING DAMAGED CMP PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 15 IN. DIA.
- ⑦ HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
- ⑩ CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
- ⑪ CEMENT CONCRETE SIDEWALK PER COFW DETAIL 3-03 AND 3-12
- ⑫ CEMENT CONCRETE ROLLED CURB AND GUTTER PER DETAIL SHEET 03

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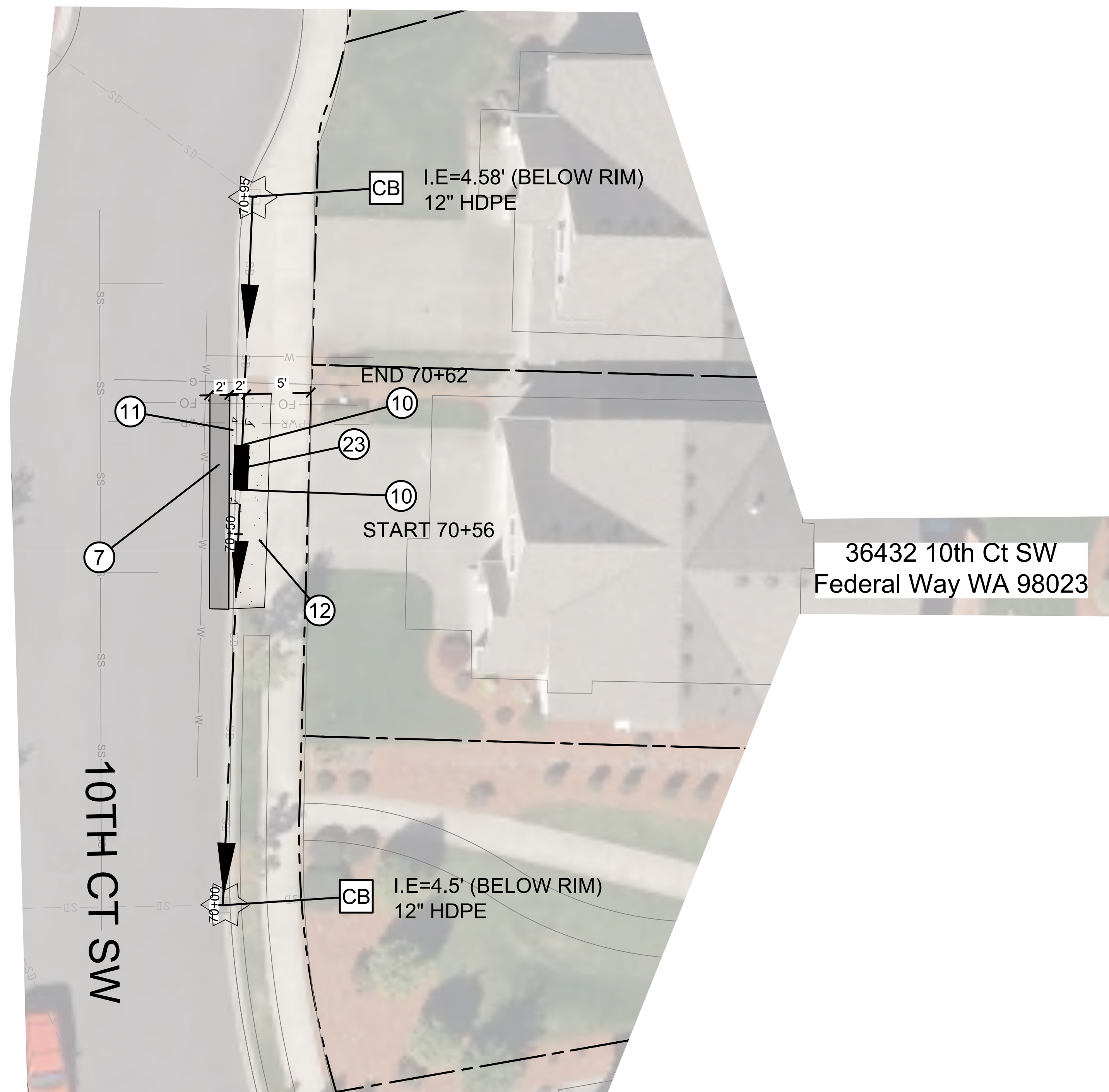
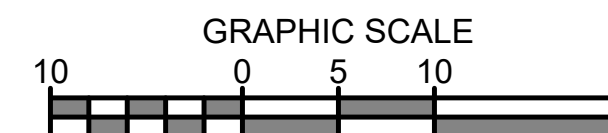
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2022 STORM PIPE REPAIR
SITE PLAN: 2648 SW 349TH PL
(PIPE #9601)

CITY PROJECT #:
34288
SHEET
A5
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- CONSTRUCTION NOTES**
- 23 REMOVE EXISTING DAMAGED HDPE PIPE AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
 - 7 HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
 - 10 CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
 - 11 CEMENT CONC. TRAFFIC CURB AND GUTTER PER COFW DWG. NO. 3-4
 - 12 CEMENT CONC. DRIVEWAY ENTRANCE TYPE RESIDENTIAL PER COFW DWG. NO. 3-6

- GENERAL NOTES**
- * JOINT TO JOINT REPLACEMENT ON CURB GUTTER AND SIDEWALK IS REQUIRED.
 - * TRENCH BACKFILL SHALL BE CSTC.

UTILITIES AS SHOWN ARE APPROXIMATE.

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DESIGNED: J. COLE
REVIEWED: C. MULLEN
APPROVED: D. WINKLER

CHRISTINE J. MULLEN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
24 Jun 2022

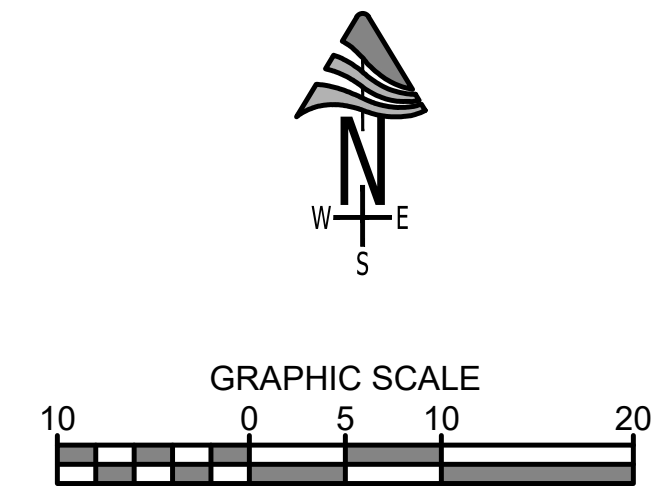
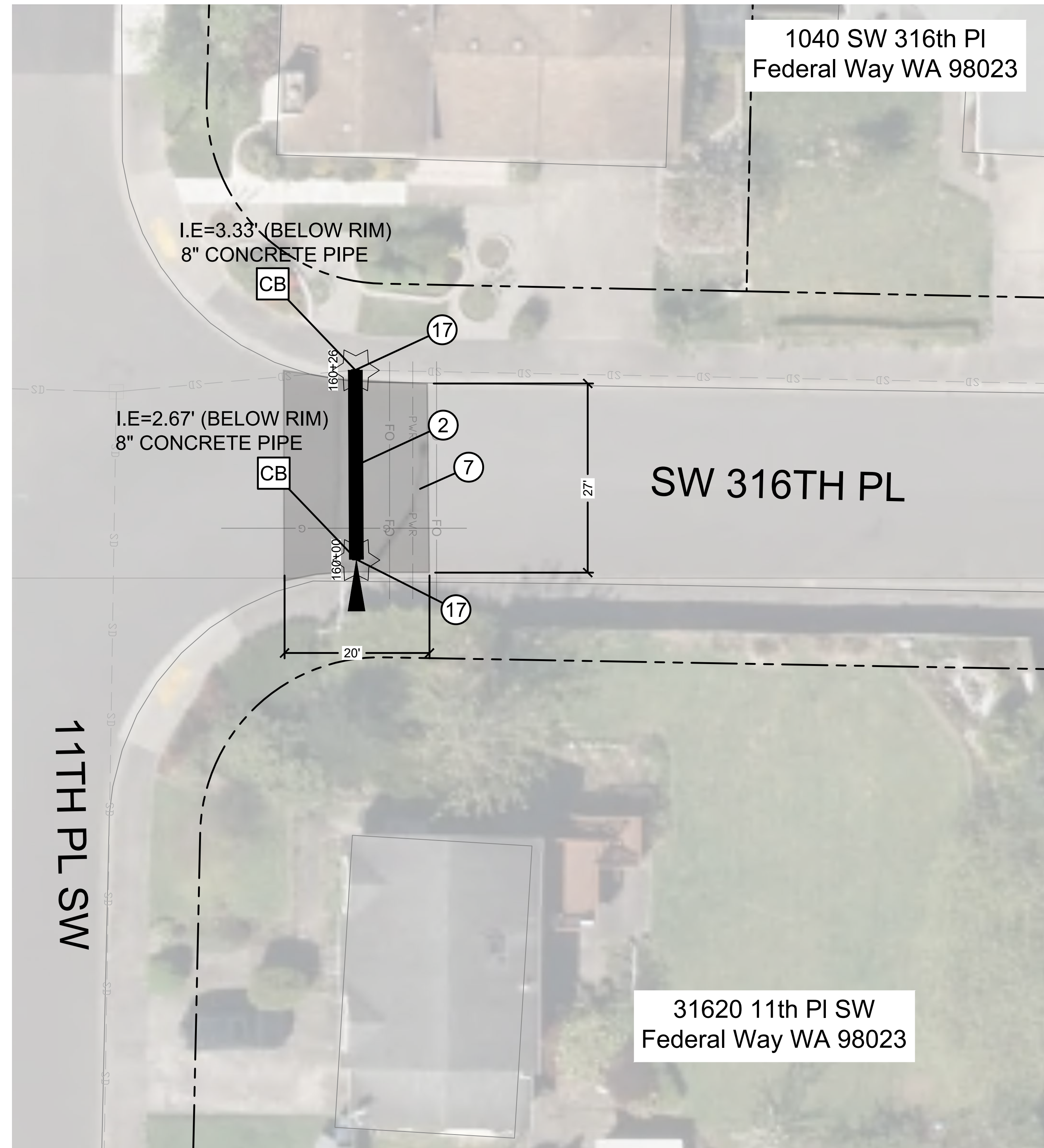
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NO.	DATE	REVISION

2022 STORM PIPE REPAIR
SITE PLAN: 36432 10TH CT SW
(PIPE #16475)

CITY PROJECT #:
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1040 SW 316th Pl
Federal Way WA 98023



CONSTRUCTION NOTES

- ② REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 8 IN. DIA.
- ⑦ HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
- ⑰ CONNECTION TO DRAINAGE STRUCTURE

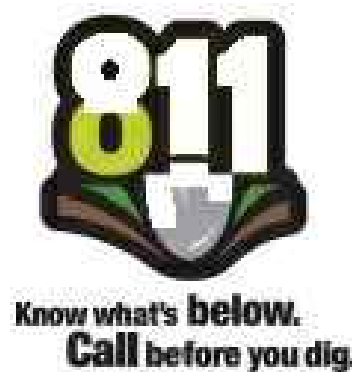
GENERAL NOTES

- * TRENCH BACKFILL SHALL BE CSTC.

UTILITIES AS SHOWN ARE APPROXIMATE.

31620 11th Pl SW
Federal Way WA 98023

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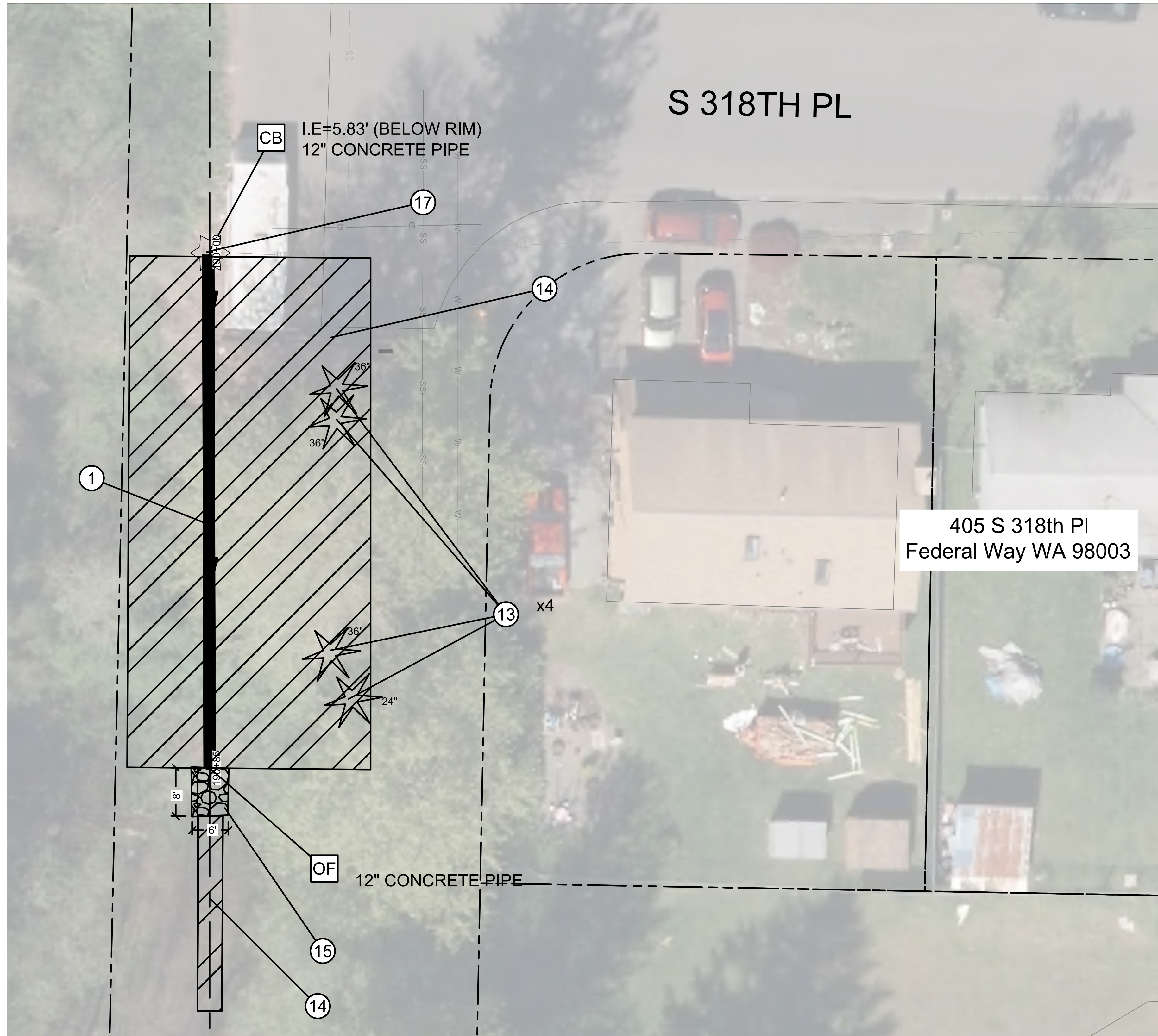
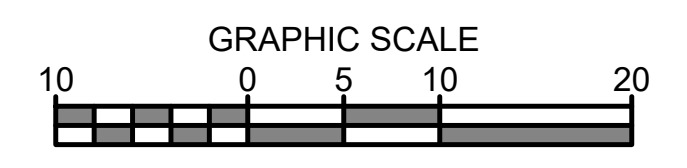
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2022 STORM PIPE REPAIR
SITE PLAN: SW 316TH PL & 11TH PL SW
(PIPE #16109)

CITY PROJECT #:
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UTILITIES AS SHOWN ARE APPROXIMATE.

CONSTRUCTION NOTES	
①	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
⑦	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
⑬	TREE REMOVAL
⑭	CLEARING AND GRUBBING
⑮	OUTLET PROTECTION, SEE OUTFALL DETAIL PAGE 3
⑰	CONNECTION TO DRAINAGE STRUCTURE

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.
*	ALL WORK IS IN SOFT SURFACE SHOULDER.
*	OUTFALL AREA NEEDS REESTABLISHED.

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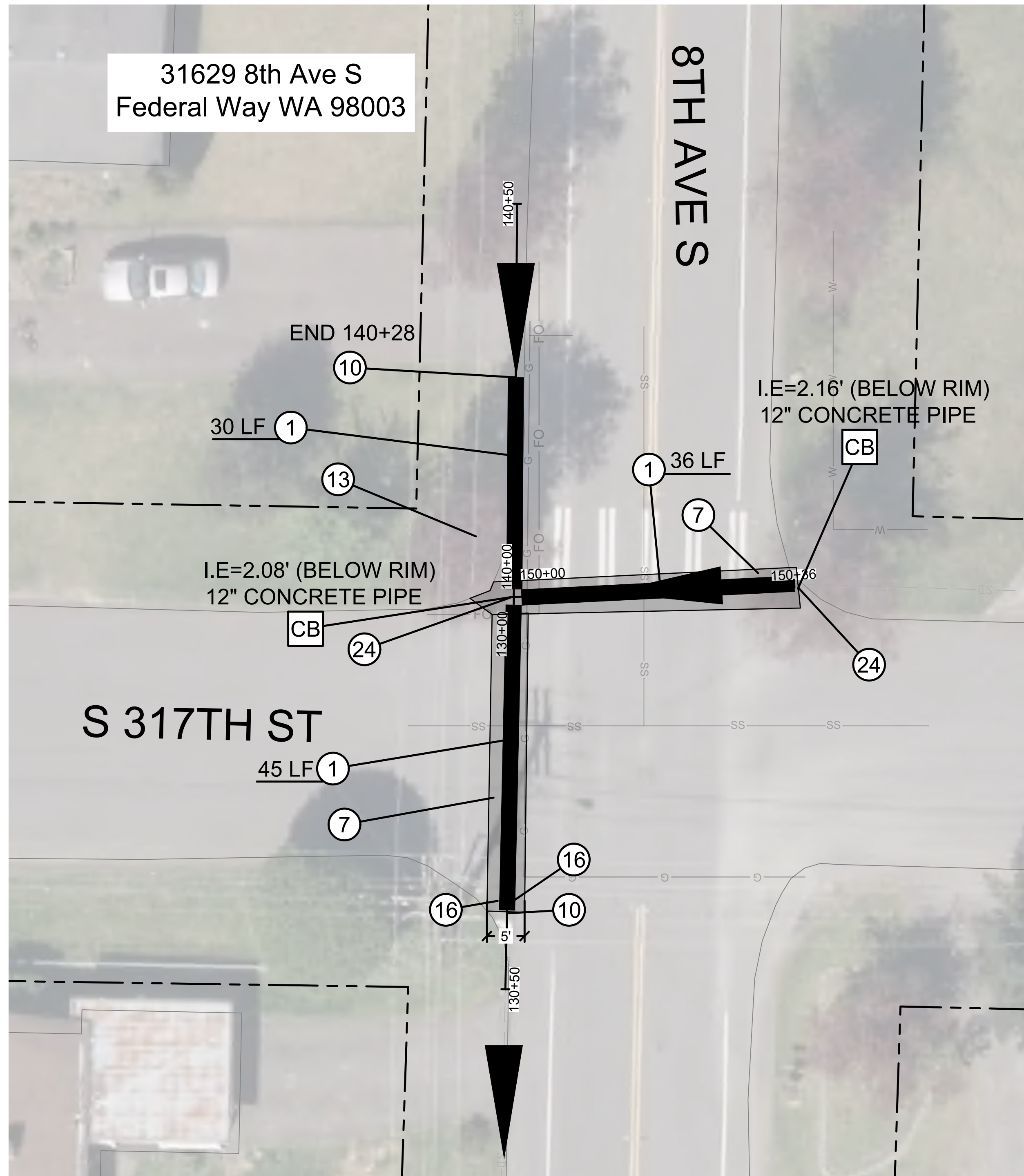
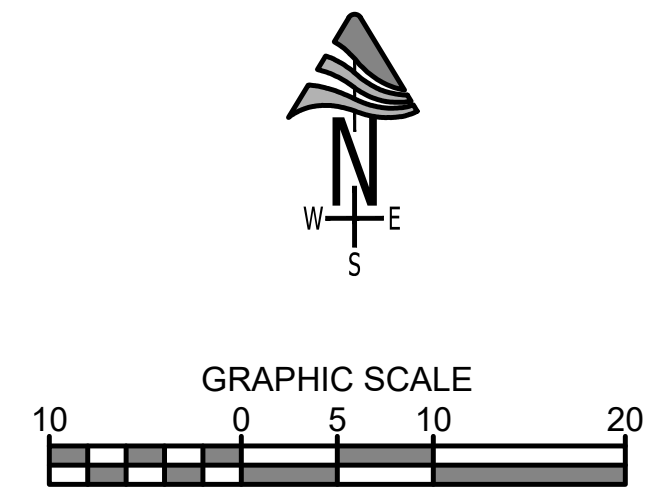
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REGISTERED PROFESSIONAL ENGINEER
24-Jun-2022

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2022 STORM PIPE REPAIR
SITE PLAN: 4TH AVE S & S 318TH PL
(PIPE #8132)

CITY PROJECT #:	34288
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UTILITIES AS SHOWN ARE APPROXIMATE.

CONSTRUCTION NOTES	
①	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
⑦	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
⑩	CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
⑬	TREE REMOVAL
⑯	ADJUST VALVE BOX
⑳	NEW TYPE 1 CATCH BASIN, MATCH NEW PIPE INVERTS TO EXISTING INVERTS

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.

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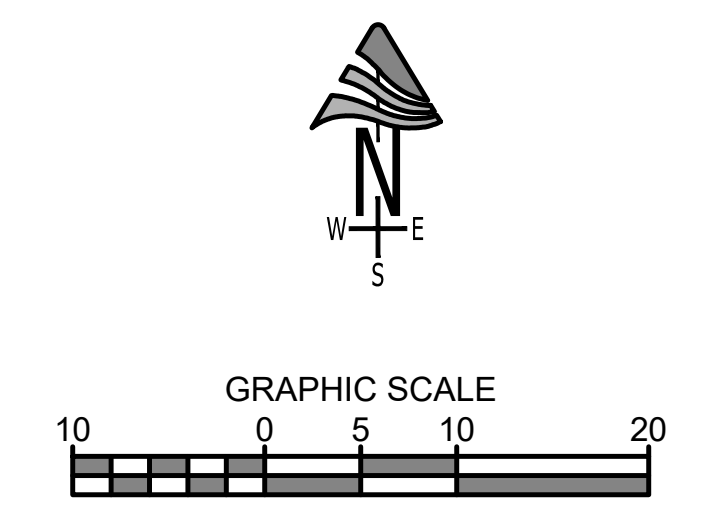
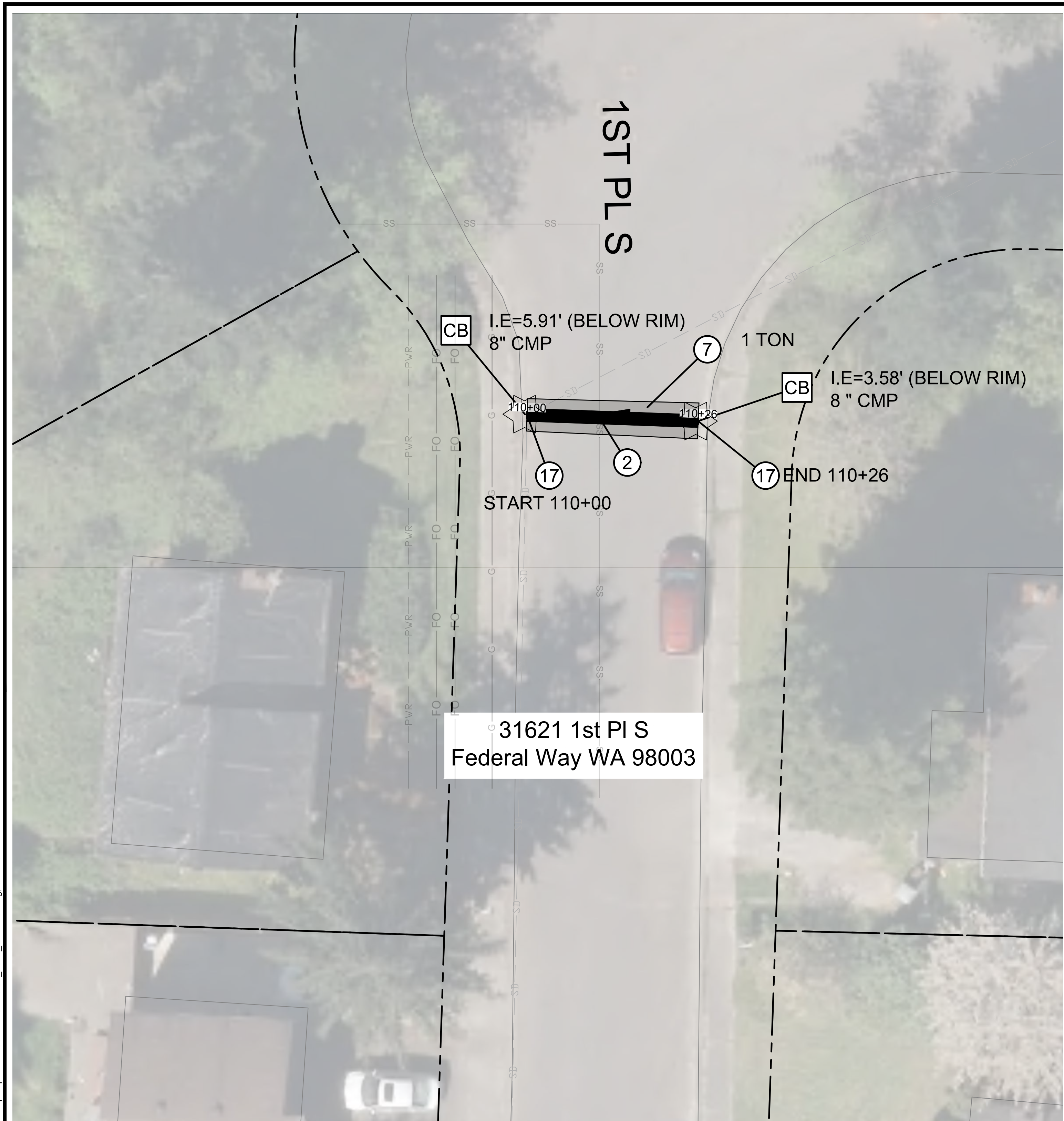
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2022 STORM PIPE REPAIR
SITE PLAN: 8TH AVE S & S 317TH ST
 (PIPES #7922, #8833 & #8836)

CITY PROJECT #:	34288
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CONSTRUCTION NOTES	
2	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 8 IN. DIA.
7	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
17	CONNECTION TO DRAINAGE STRUCTURE

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.

*** ALL UTILITIES ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR LOCATING.***

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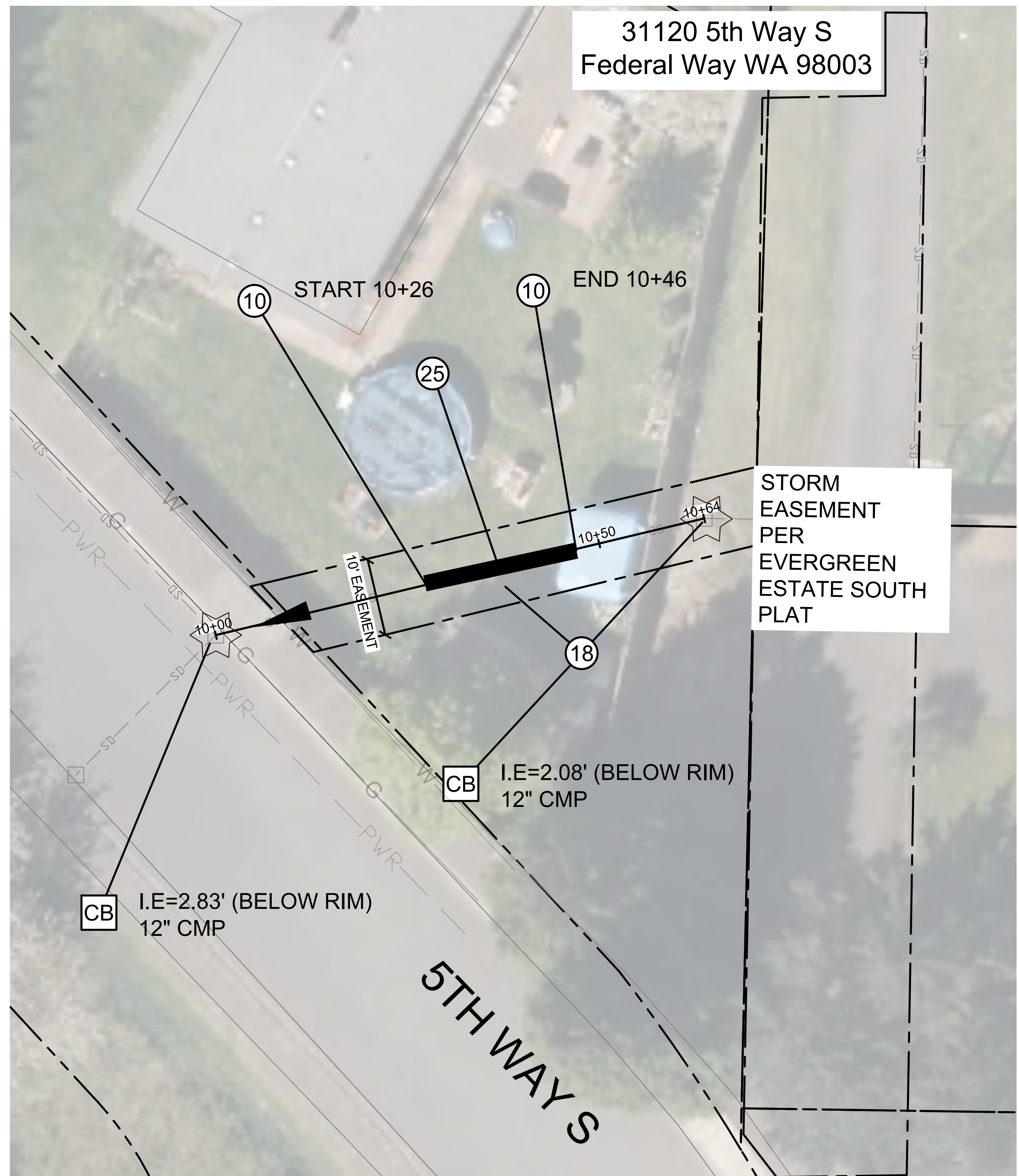
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2022 STORM PIPE REPAIR
SITE PLAN: 1ST PL S & S 316TH PL
 (PIPE #692)

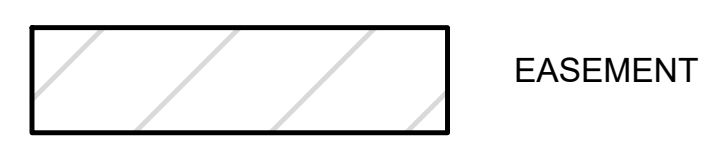
CITY PROJECT #: 34288
SHEET B4
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- CONSTRUCTION NOTES**
- ⑩ CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
 - ⑱ SOD LAWN, INCL. 4 IN. TOPSOIL
 - ⑳ REMOVE EXISTING DAMAGED CMP PIPE AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.

- GENERAL NOTES**
- * TRENCH BACKFILL SHALL BE CSTC
 - * BYPASS AND PUMPING PLAN REQUIRED ON ALL SCHEDULES.



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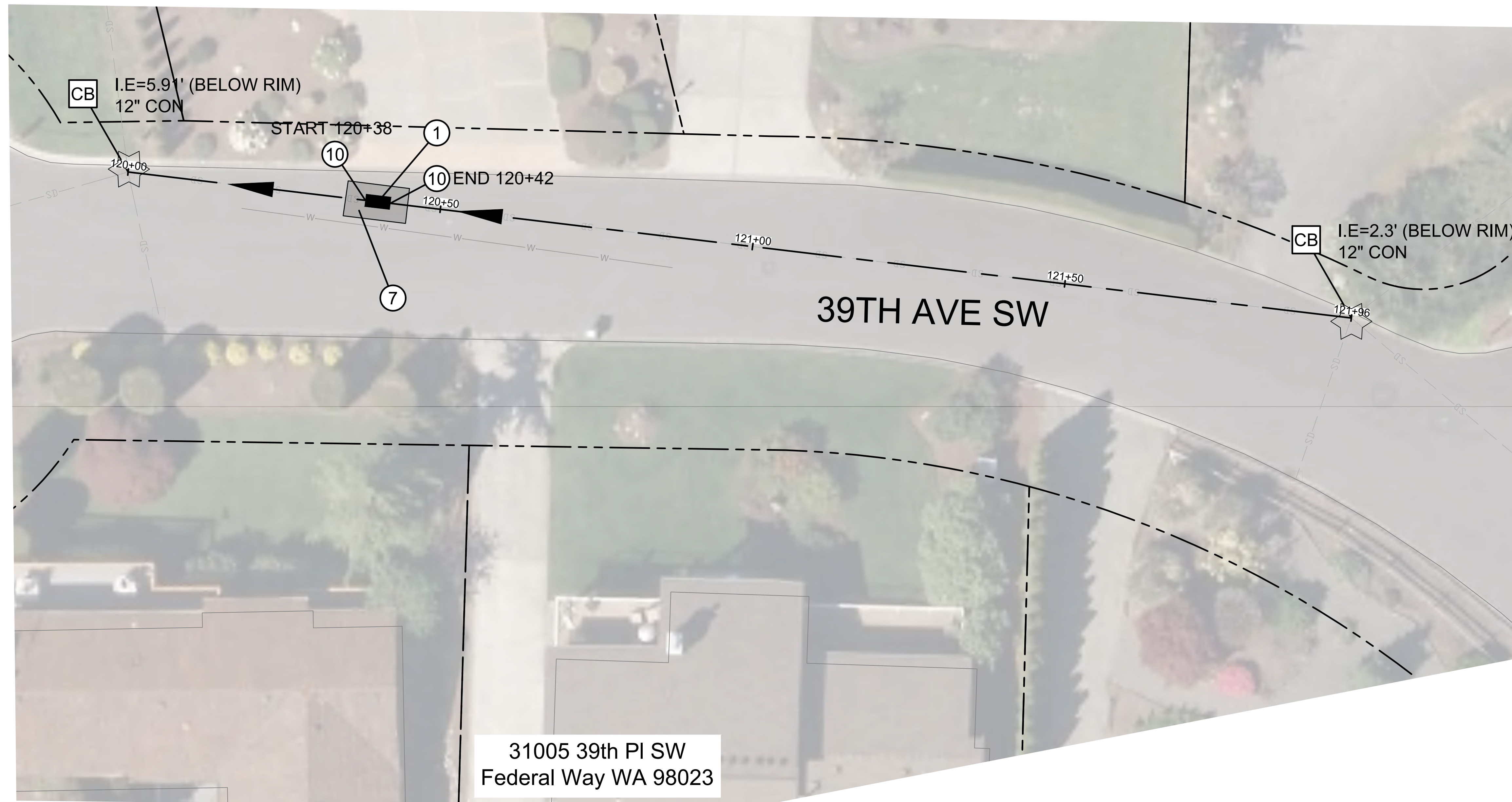
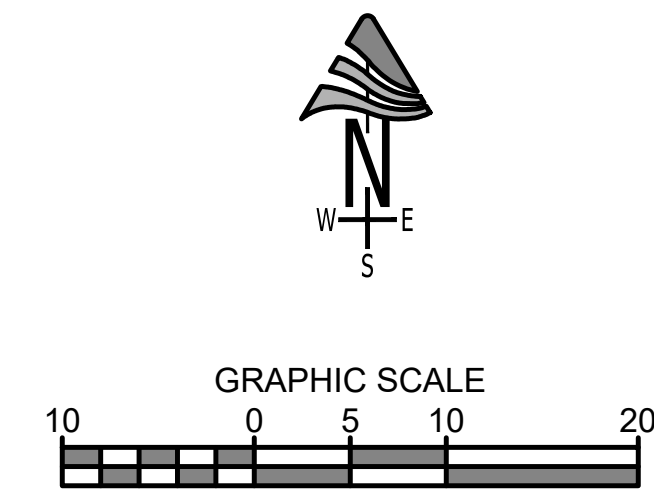
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REGISTERED PROFESSIONAL ENGINEER
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2022 STORM PIPE REPAIR
SITE PLAN: 31120 5TH WAY S
(PIPE #16582)

CITY PROJECT #:
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CONSTRUCTION NOTES	
1	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
7	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
10	CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.

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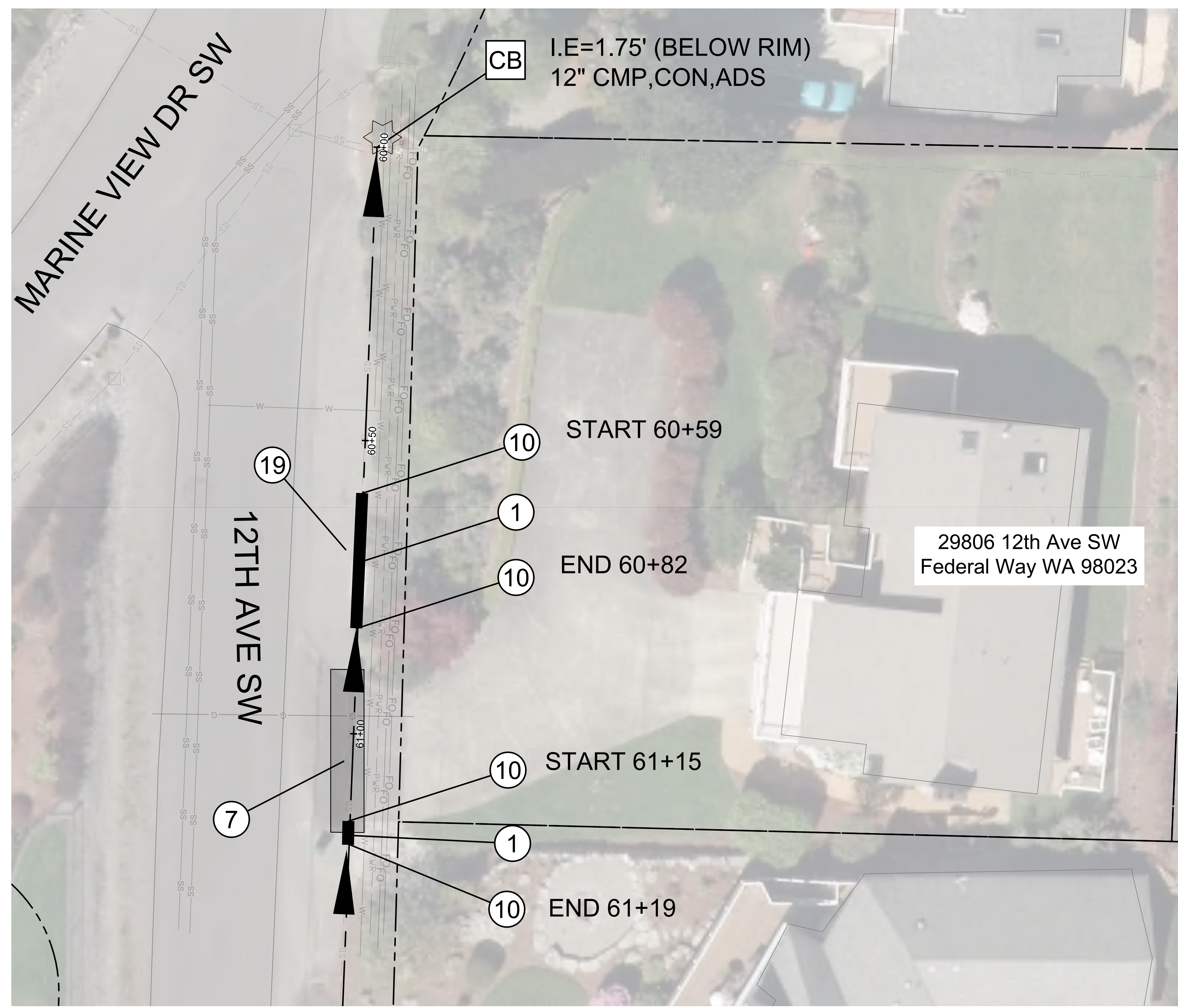


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2022 STORM PIPE REPAIR
SITE PLAN: 39TH AVE SW & 39TH PL SW
(PIPE #1804)

CITY PROJECT #:
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CONSTRUCTION NOTES	
①	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
⑦	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
⑩	CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
⑱	SHOULDER RESTORATION

GENERAL NOTES	
*	JOINT TO JOINT REPLACEMENT ON SIDEWALK IS REQUIRED.
*	TRENCH BACKFILL SHALL BE CSTC.

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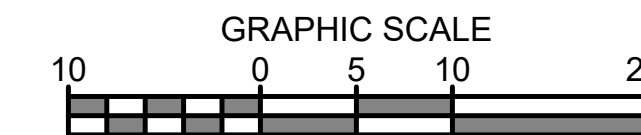
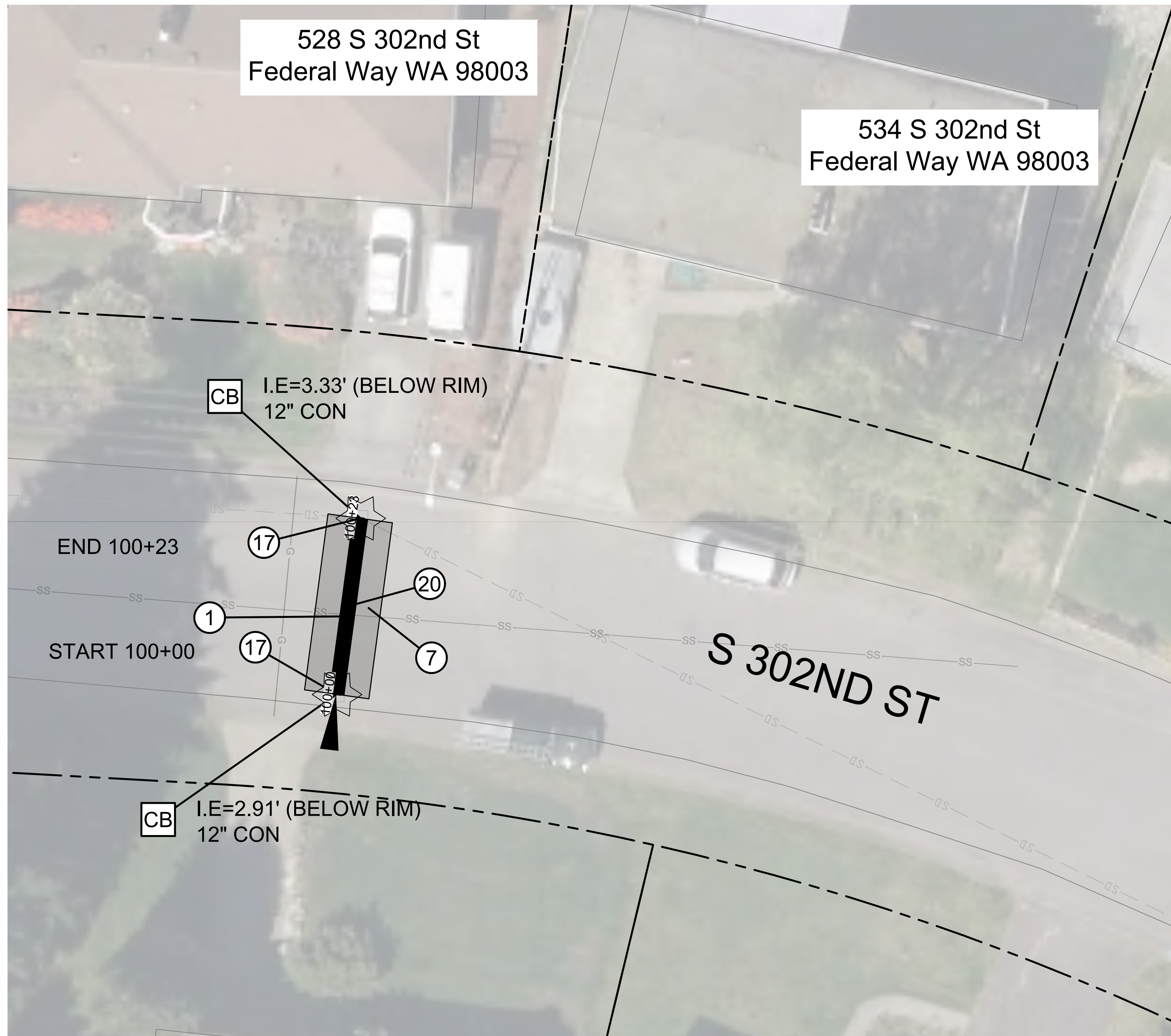
2022 STORM PIPE REPAIR
SITE PLAN: 12TH AVE SW & MARINE VIEW DR SW
(PIPE #11824)

CITY PROJECT #:	34288
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528 S 302nd St
Federal Way WA 98003

534 S 302nd St
Federal Way WA 98003



CONSTRUCTION NOTES	
①	REMOVE EXISTING DAMAGED CONCRETE PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
⑦	HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
⑰	CONNECTION TO DRAINAGE STRUCTURE
⑳	REMOVE EXISTING MONUMENT AND REPLACE WITH NEW MONUMENT CASE, COVER, AND PIPE

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.

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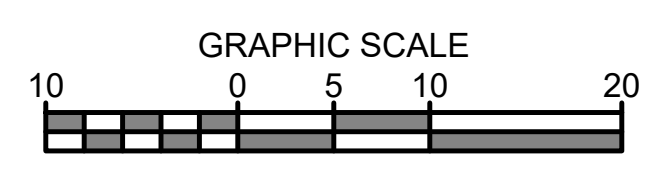


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2022 STORM PIPE REPAIR
SITE PLAN: S 302ND ST NEAR 5TH AVE S
(PIPE #9221)

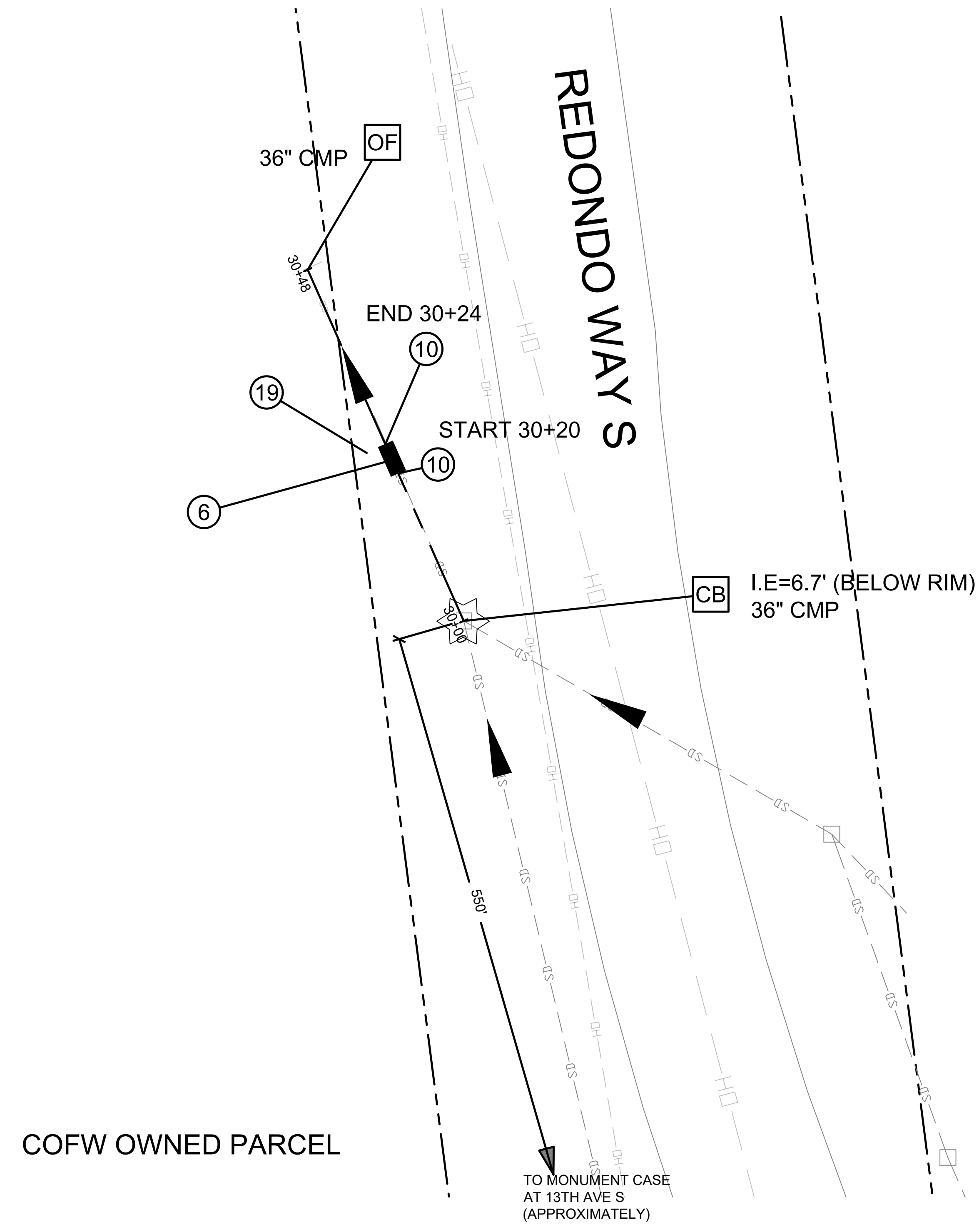
CITY PROJECT #:
34288
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S
1003

28940 12th Ave S
Federal Way WA 98003



CONSTRUCTION NOTES	
6	REMOVE EXISTING DAMAGED CMP PIPE, AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 36 IN. DIA.
10	CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
19	SHOULDER RESTORATION

GENERAL NOTES	
*	TRENCH BACKFILL SHALL BE CSTC.
*	ALL WORK IS IN SOFT SURFACE SHOULDER.
*	UPSTREAM STRUCTURE AT STA 30+00 IS VERY OLD BRICK STACKED. DAMAGE TO STRUCTURE WILL BE AT CONTRACTORS EXPENSE.

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24 Jun-2022

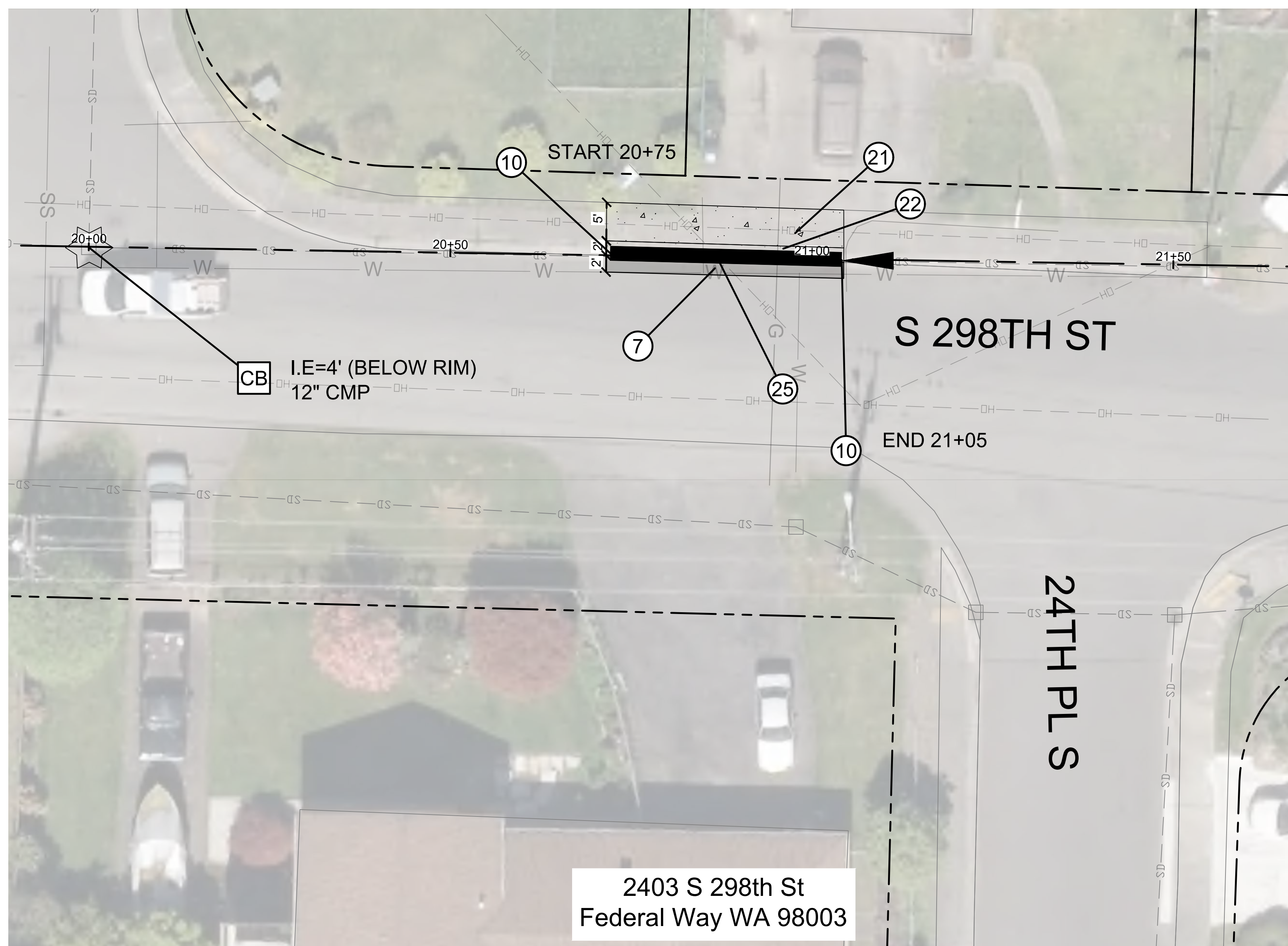
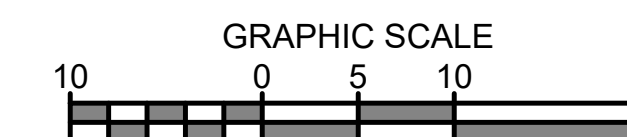
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2022 STORM PIPE REPAIR

SITE PLAN: REDONDO WAY S NEAR 13TH AVE S
(PIPE #24855)

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CONSTRUCTION NOTES

- (25) REMOVE EXISTING DAMAGED CMP PIPE AND REPLACE WITH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, 12 IN. DIA.
- (7) HMA FOR PAVEMENT REPAIR CL. 1/2", PG 58H -22 PER COFW DWG. NO. 3-28
- (10) CONNECT TO EXISTING PIPE WITH FERNCO COUPLER OR APPROVED EQUIVALENT
- (21) CEMENT CONCRETE SIDEWALK PER COFW DETAIL 3-03 AND 3-12
- (22) CEMENT CONCRETE ROLLED CURB AND GUTTER PER DETAIL SHEET 03

GENERAL NOTES

- * JOINT TO JOINT REPLACEMENT ON CURB GUTTER AND SIDEWALK IS REQUIRED.
- * TRENCH BACKFILL SHALL BE CSTC.

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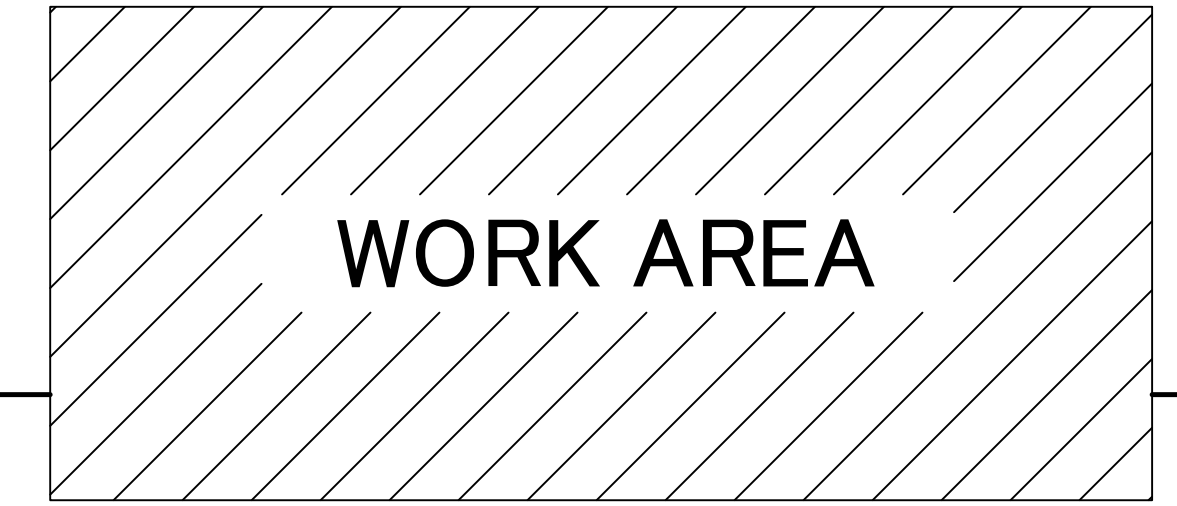
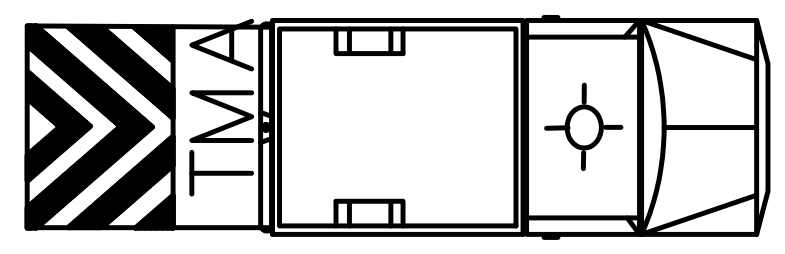
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2022 STORM PIPE REPAIR
SITE PLAN: 2403 S 298TH ST
 (PIPE #4283)

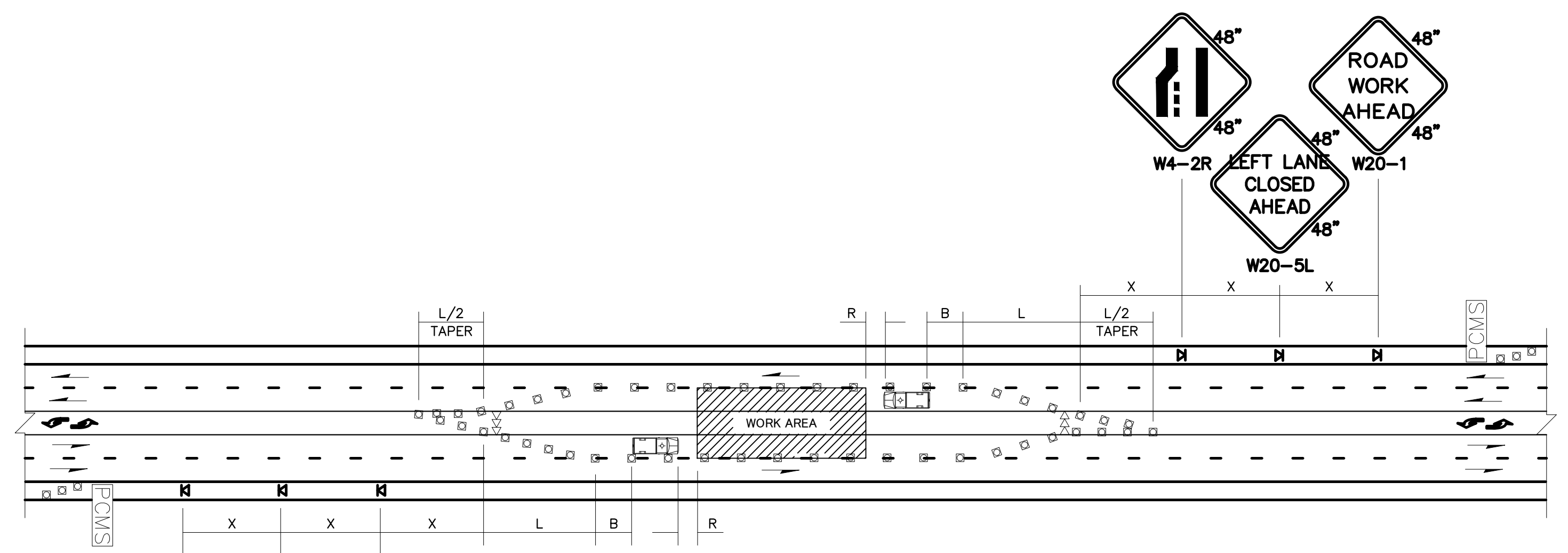
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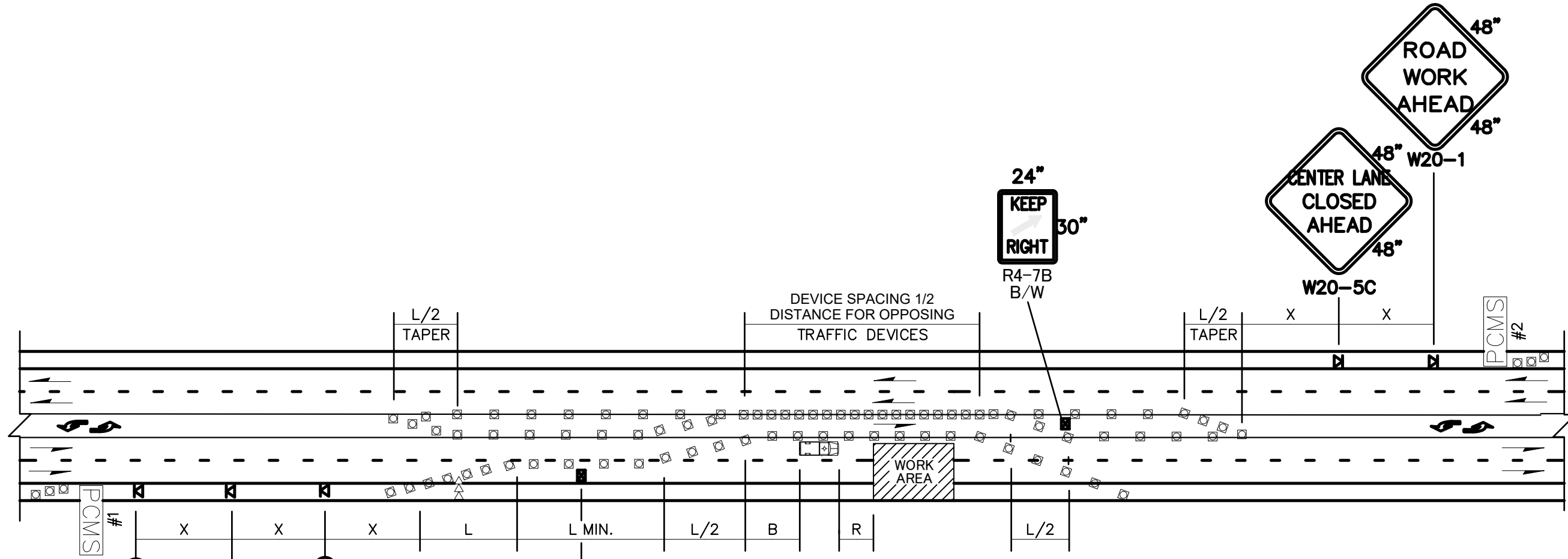
2' MIN.



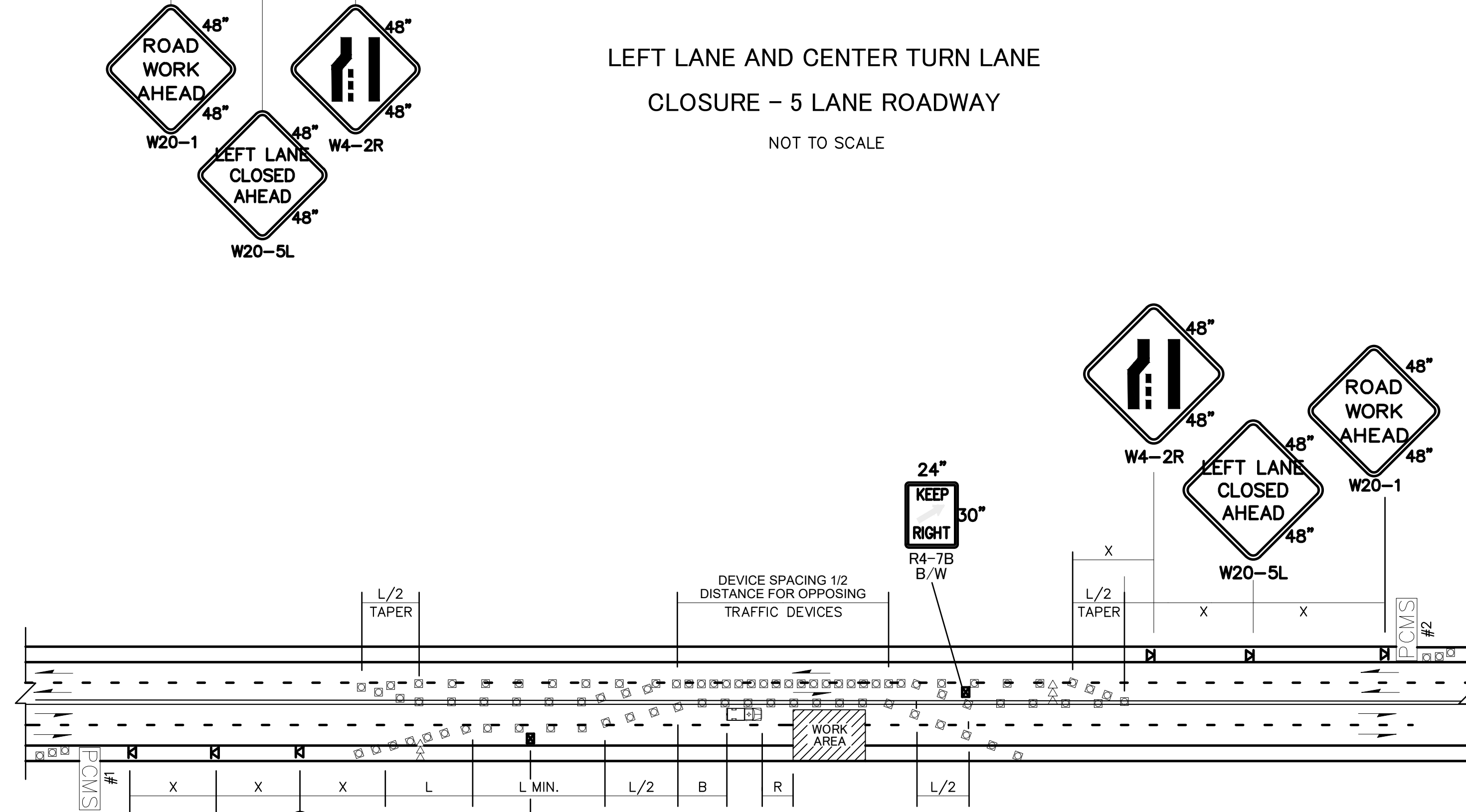
WORK AREA



LEFT LANE AND CENTER TURN LANE
CLOSURE - 5 LANE ROADWAY
NOT TO SCALE



RIGHT LANE CLOSURE WITH SHIFT - 5 LANE ROADWAY
NOT TO SCALE



HALF ROAD CLOSURE - 4 LANE ROADWAY
NOT TO SCALE

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2022 STORM PIPE REPAIR
TRAFFIC CONTROL PLAN 1

CITY PROJECT #:
34288
SHEET
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20 OF 23

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R					
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R
NO SPECIFIED DISTANCE REQUIRED

PCMS #1	
1	2
RIGHT / LEFT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

PCMS #2	
1	2
CENTER LANE CLOSED	NNO LEFT TURNING
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

SIGN SPACING = X (1)		
RURAL ROADS	45 / 55 MPH	500' +/-
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' +/-
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' +/- (2)
URBAN STREETS	25 MPH OR LESS	100' +/- (2)




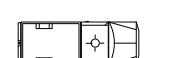


(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80
35/45	30	60
25/30	20	40

NOTES

1. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
2. EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
3. DEVICES SHALL NOT ENCROACH INTO THE ADJACENT LANE.
4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT) (RECOMMENDED).
5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
6. ALL SIGNS ARE BLACK ON ORANGE.

LEGEND

-  TEMPORARY SIGN LOCATION
-  CHANNELIZING DEVICES
-  SEQUENTIAL ARROW SIGN
-  PROTECTIVE VEHICLE
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

100% DRAWINGS



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DESIGNED: J. COLE
REVIEWED: C. MULLEN
APPROVED: D. WINKLER



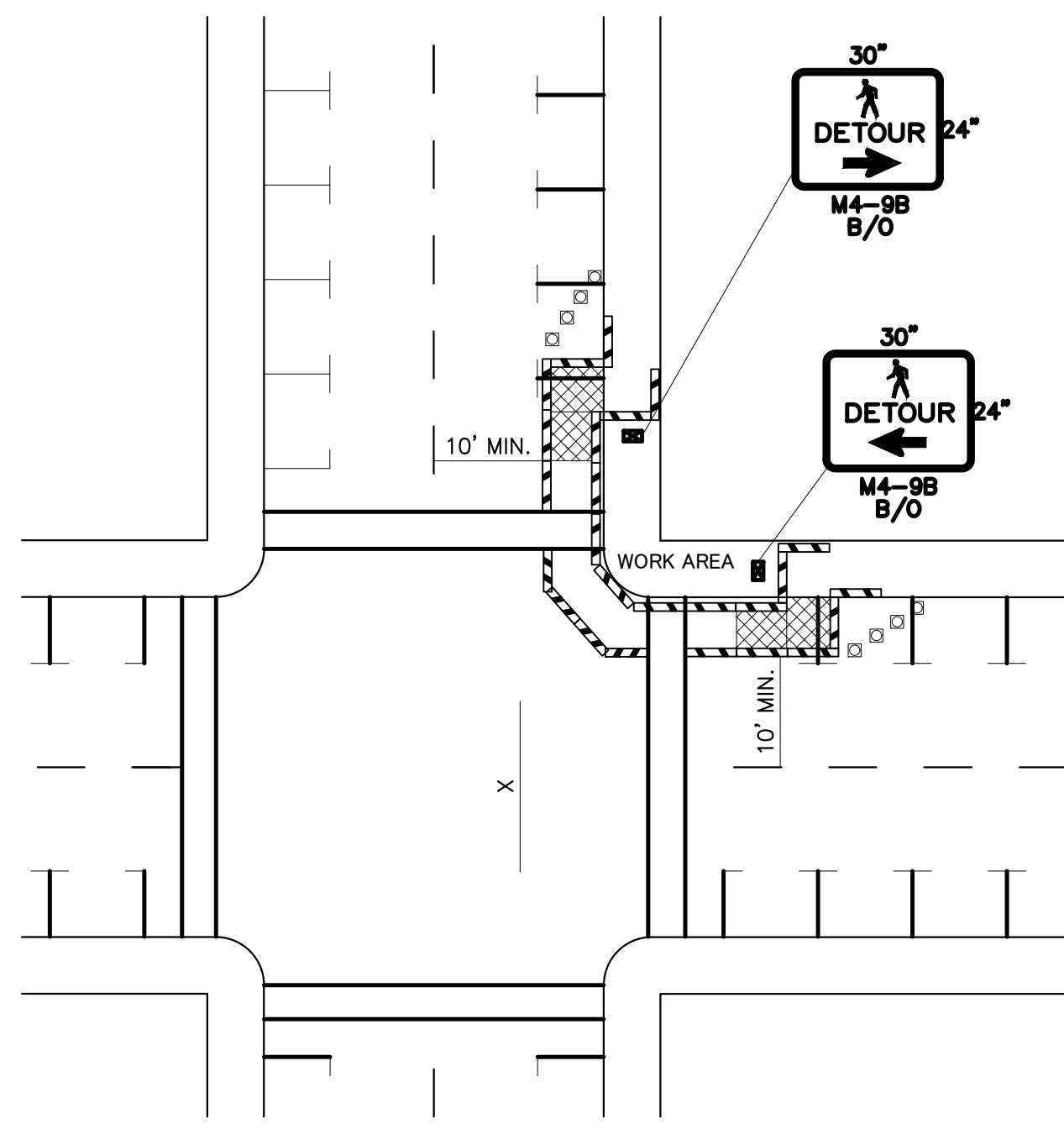
DRAWING VERSION / REVISION LOG		
NO.	DATE	REVISION

2022 STORM PIPE REPAIR
TRAFFIC CONTROL PLAN 2

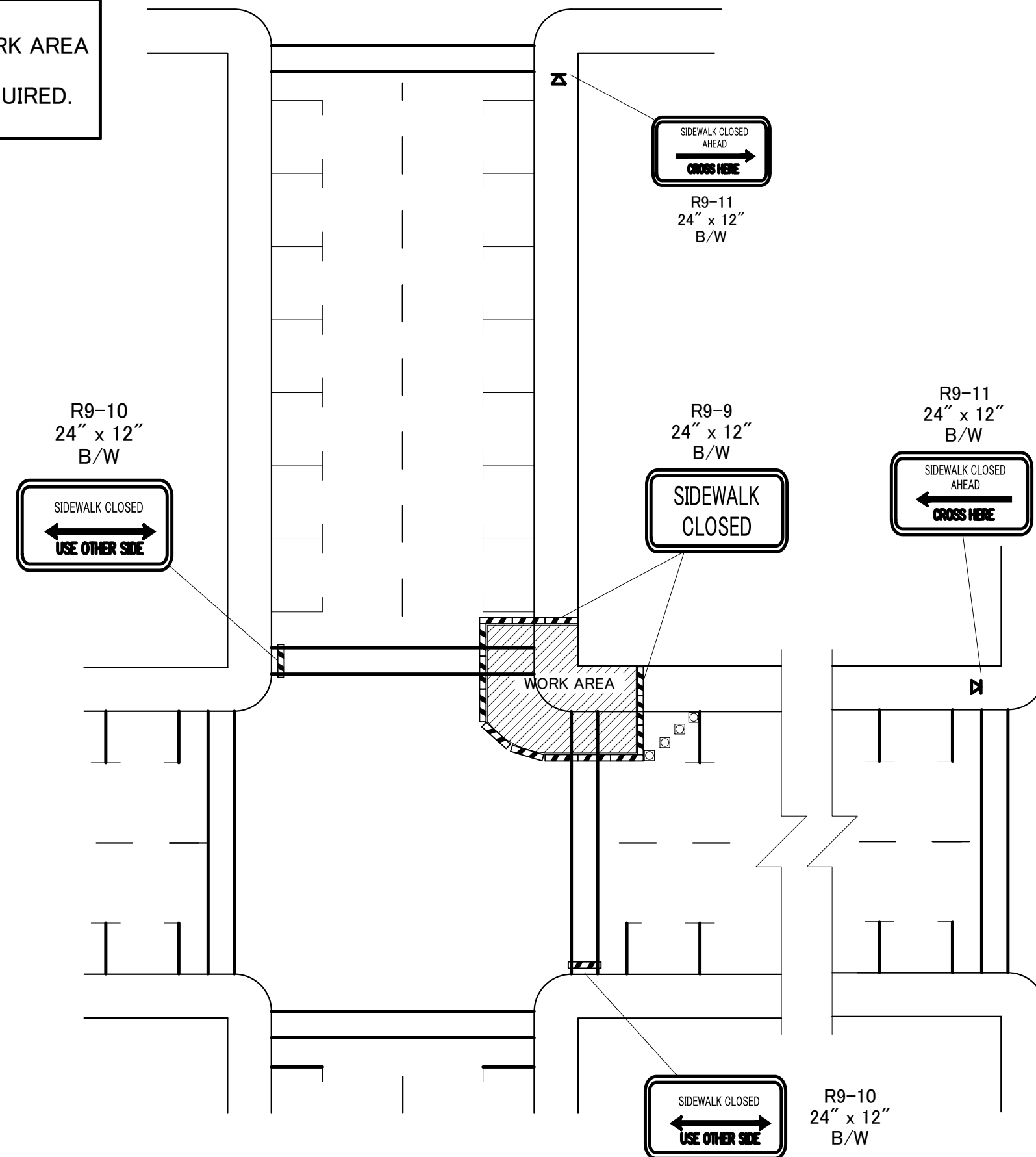
CITY PROJECT #:
34288
SHEET
TC-2
21 OF 23

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NO PARKING R8-3 24" x 30" R/W
 INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL. PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.



SIDEWALK DIVERSION



SIDEWALK DETOUR

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

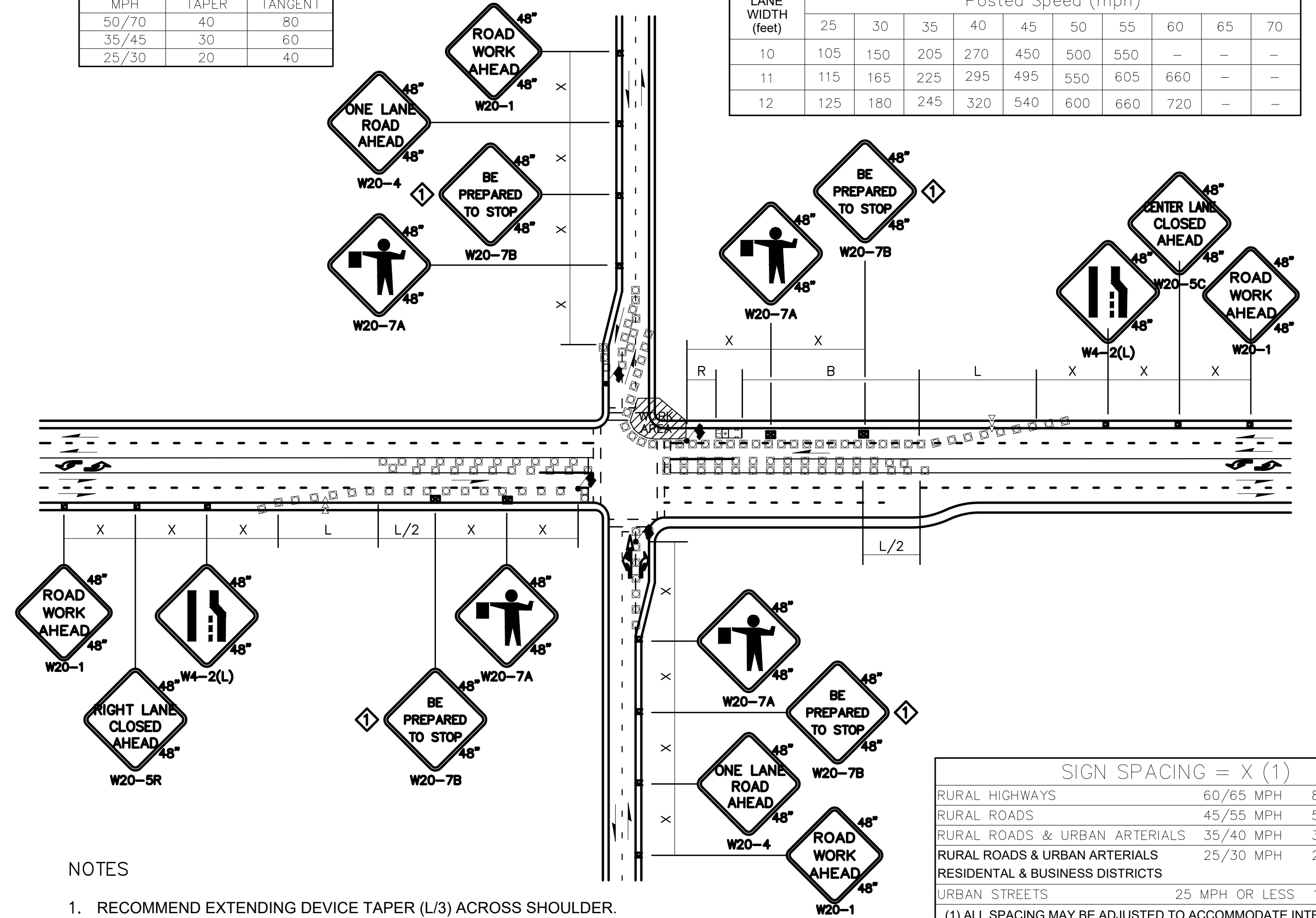
NOTES

- CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
- A 60" PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
- CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
- ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED.
- TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.

LEGEND	
	TEMPORARY SIGN LOCATION
	CHANNELIZING DEVICES
	PEDESTRIAN CHANNELIZING DEVICES
	TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

LANE WIDTH (feet)	MINIMUM TAPER LENGTH = L (feet)									
	Posted Speed (mph)									
10	25	30	35	40	45	50	55	60	65	70
11	105	150	205	270	450	500	550	605	660	—
12	125	180	245	320	540	600	660	720	—	—



SIGN SPACING = X (1)		
RURAL HIGHWAYS	60/65 MPH	800' +/-
RURAL ROADS	45/55 MPH	500' +/-
RURAL ROADS & URBAN ARTERIALS	35/40 MPH	350' +/-
RURAL ROADS & URBAN ARTERIALS	25/30 MPH	200' +/- (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	100' +/- (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
 (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

NOTES

- RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
- MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
- ALL SIGNS ARE BLACK ON ORANGE.

INTERSECTION LANE CLOSURE – FIVE LANE ROADWAY

LEGEND	
	FLAGGING STATION
	TEMPORARY SIGN LOCATION
	CHANNELIZING DEVICES
	SEQUENTIAL ARROW SIGN
	PROTECTIVE VEHICLE - RECOMMENDED
	TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

BUFFER DATA											
LONGITUDINAL BUFFER SPACE = B											
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70	
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730	
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R											
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.						
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'	100'	123'	172'	74'	100'	150'
PROTECTIVE VEHICLE (WORK VEHICLE) = R											
NO SPECIFIED DISTANCE REQUIRED											

100% DRAWINGS

DRAWING VERSION / REVISION LOG		
NO.	DATE	REVISION