

CITY OF SPARKS

BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT

BID NO. 24/25-004
PUBLIC WORKS PROJECT NO. WA-2025-033



950 SANDHILL ROAD, SUITE 100
RENO, NV 89521
TEL: 775.827.6111
WWW.LUMOSINC.COM
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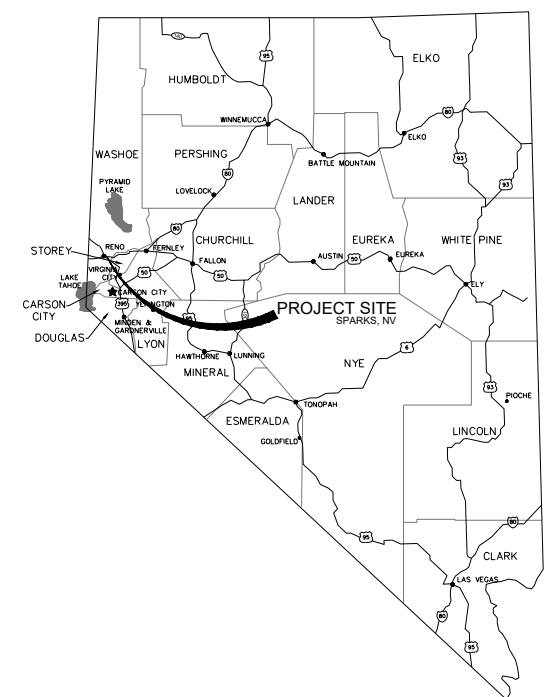


SPARKS CITY COUNCIL

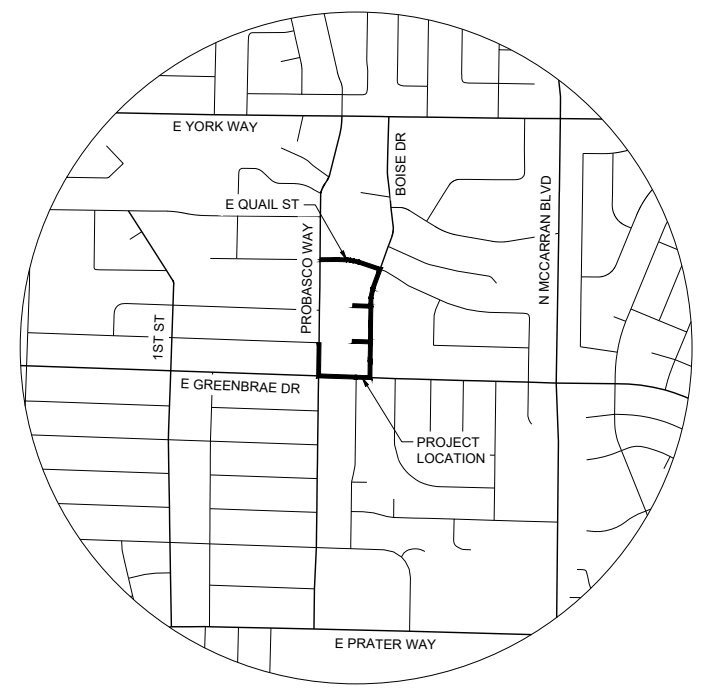
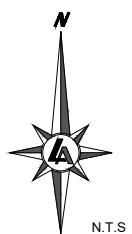
MAYOR _____ ED LAWSON
WARD 1 _____ DONALD ABBOTT
WARD 2 _____ DIAN VANDERWELL
WARD 3 _____ PAUL ANDERSON
WARD 4 _____ CHARLENE BYBEE
WARD 5 _____ KRISTOPHER DAHIR
CITY MANAGER _____ DION LOUTHAN

APPROVED BY:

 _____ 10-21-2024
AMBER SOSA, P.E. _____ DATE
CITY ENGINEER



LOCATION MAP



VICINITY MAP

SHEET INDEX:

- C1.0 TITLE SHEET
- C1.1 NOTES, LEGEND, ABBREVIATIONS
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- C1.3 SEWER CONTROL SHEET
- C1.4 STORM DRAIN CONTROL SHEET
- SANITARY SEWER SHEETS
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- C2.2 BOISE DRIVE SEWER PLAN
- C2.3 BOISE DRIVE SEWER PLAN
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- C2.5 GREENBRAE DRIVE SEWER PLAN
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- C3.3 BOISE DRIVE SURFACE IMPROVEMENT PLAN
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- C4.5 BROOKS AND ROGER CIR GRADING PLAN
- C4.6 PEDESTRIAN RAMP ENLARGED VIEWS
- C4.7 PEDESTRIAN RAMP ENLARGED VIEWS
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- C4.9 PEDESTRIAN RAMP ENLARGED VIEWS
- C4.10 INTERSECTION ENLARGED VIEWS
- DETAIL SHEETS
- D1.0 DETAIL SHEET
- D1.1 DETAIL SHEET
- D1.2 DETAIL SHEET
- D1.3 DETAIL SHEET
- D1.4 DETAIL SHEET
- D1.5 DETAIL SHEET
- D1.6 DETAIL SHEET
- D1.7 DETAIL SHEET



OWNER

ATTN: BOB SCHRICKER
431 PRATER WAY
SPARKS, NEVADA 89431
TEL: 775.353.2375



ENGINEER

950 SANDHILL ROAD, SUITE 100
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CITY OF SPARKS
**BOISE DRIVE SEWER INTERCEPTOR
REHABILITATION PROJECT**
TITLE SHEET
NEVADA
SPARKS
WASHOE

REV	DATE	DESCRIPTION

BAR IS 1 INCH ON ORIGINAL DRAWING
0 1"

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C1.0

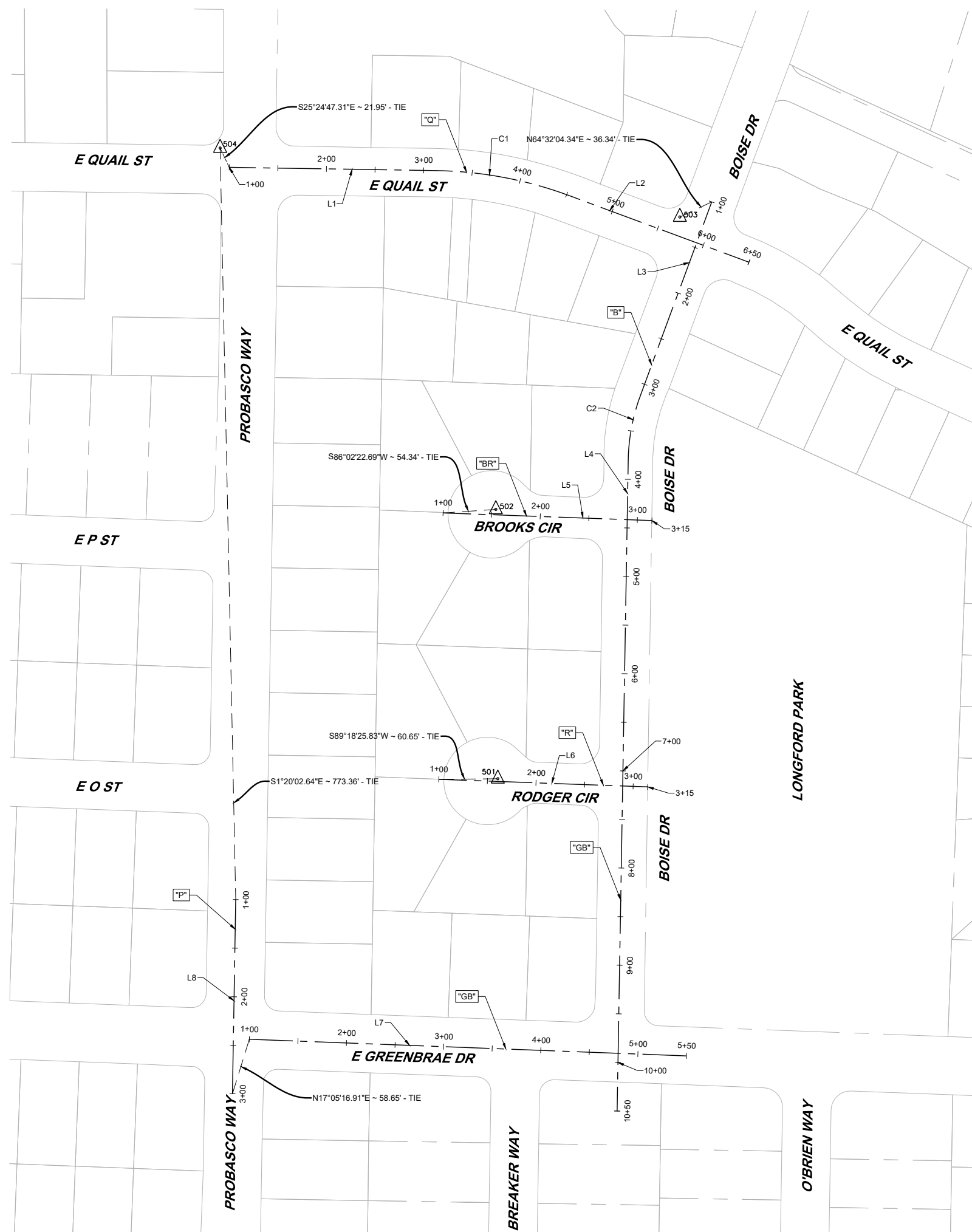
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JOB NO.: 10565.000



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L:\AP\0565.000 - Sewer Rehab - Quail St, Boise Dr & Greenbrae Dr\DWG\Sheets\056500ROADWAY CONTROL.dwg;C1.2 ROADWAY CONTROL SHEET.
09/25/2024 03:52 pm Ineedy



BASIS OF ELEVATION

DATUM: NAVD88
PROJECT BENCHMARK = CITY OF SPARKS BENCHMARK #79
HAVING AN ELEVATION OF 4409.18

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS PROJECT IS NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94) BASED UPON REAL TIME KINEMATIC GPS OBSERVATION, OBSERVED 11-23-2021 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER FROM WASHOE COUNTY CONTROL POINT N53SM01176 MODIFIED BY A COMBINED FACTOR OF 1.000197939, SCALED FROM 0.00N, 0.00E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
501	14875192.52	2299161.86	4407.58	CP MAG NAIL & SHINER
502	14875469.60	2299159.10	4408.32	CP MAG NAIL & SHINER
503	14875770.93	2299347.64	4409.90	CP MAG NAIL & SHINER
504	14875840.67	2298874.55	4408.00	CP MAG NAIL & SHINER

ALIGNMENT Q

LINE #	LENGTH	DIRECTION
L1	213.15	S89° 14' 27.54"E
L2	197.89	S69° 49' 18.01"E

CURVE #	LENGTH	RADIUS	DELTA
C1	138.96	410.00	19.42

ALIGNMENT B

LINE #	LENGTH	DIRECTION
L3	212.96	S20° 04' 48.83"W
L4	669.84	S0° 49' 46.47"W

CURVE #	LENGTH	RADIUS	DELTA
C2	67.20	200.00	19.25

ALIGNMENT BR

LINE #	LENGTH	DIRECTION
L5	215.00	S88° 03' 38.45"E

ALIGNMENT R

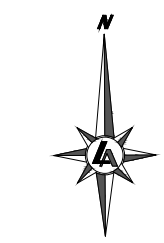
LINE #	LENGTH	DIRECTION
L6	215.00	S88° 04' 31.15"E

ALIGNMENT GB

LINE #	LENGTH	DIRECTION
L7	450.00	S87° 58' 12.25"E

ALIGNMENT P

LINE #	LENGTH	DIRECTION
L8	199.75	N0° 48' 58.58"E



0 20' 40'
22x34 SHEETS = HORIZONTAL: 1"=20'
11x17 SHEETS = HORIZONTAL: 1"=40'



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CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
ROADWAY CONTROL SHEET
SPARKS WASHOE NEVADA

REV	DATE	DESCRIPTION

BY: _____
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C1.2
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SEPTEMBER 2024

L:\AP\0565.000 - Sewer Rehab - Quail St, Boise Dr & Greenbrae Dr\DWG\Sheets\0565000STORM CONTROL.dwg,C1.4, 09/25/2024 03:52 pm neeley



BASIS OF ELEVATION

DATUM: NAVD88
PROJECT BENCHMARK = CITY OF SPARKS BENCHMARK #79
HAVING AN ELEVATION OF 4409.18

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PROJECT CONTROL

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502	14875469.60	2299159.10	4408.32	CP MAG NAIL & SHINER
503	14875770.93	2299347.64	4409.90	CP MAG NAIL & SHINER
504	14875840.67	2298874.55	4408.00	CP MAG NAIL & SHINER

ALIGNMENT SD-A

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	50.00	N1° 25' 11.89"E

ALIGNMENT SD-B

LINE TABLE		
LINE #	LENGTH	DIRECTION
L2	33.07	N89° 44' 50.27"E
L3	14.54	S89° 07' 58.45"E
L4	22.39	S89° 01' 37.33"E

ALIGNMENT SD-C

LINE TABLE		
LINE #	LENGTH	DIRECTION
L5	40.00	S87° 38' 11.57"E

ALIGNMENT SD-D

LINE TABLE		
LINE #	LENGTH	DIRECTION
L6	40.00	N73° 46' 03.00"E



0 20' 40'
22x34 SHEETS = HORIZONTAL: 1"=20'
11x17 SHEETS = HORIZONTAL: 1"=40'



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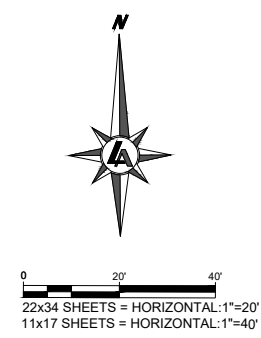
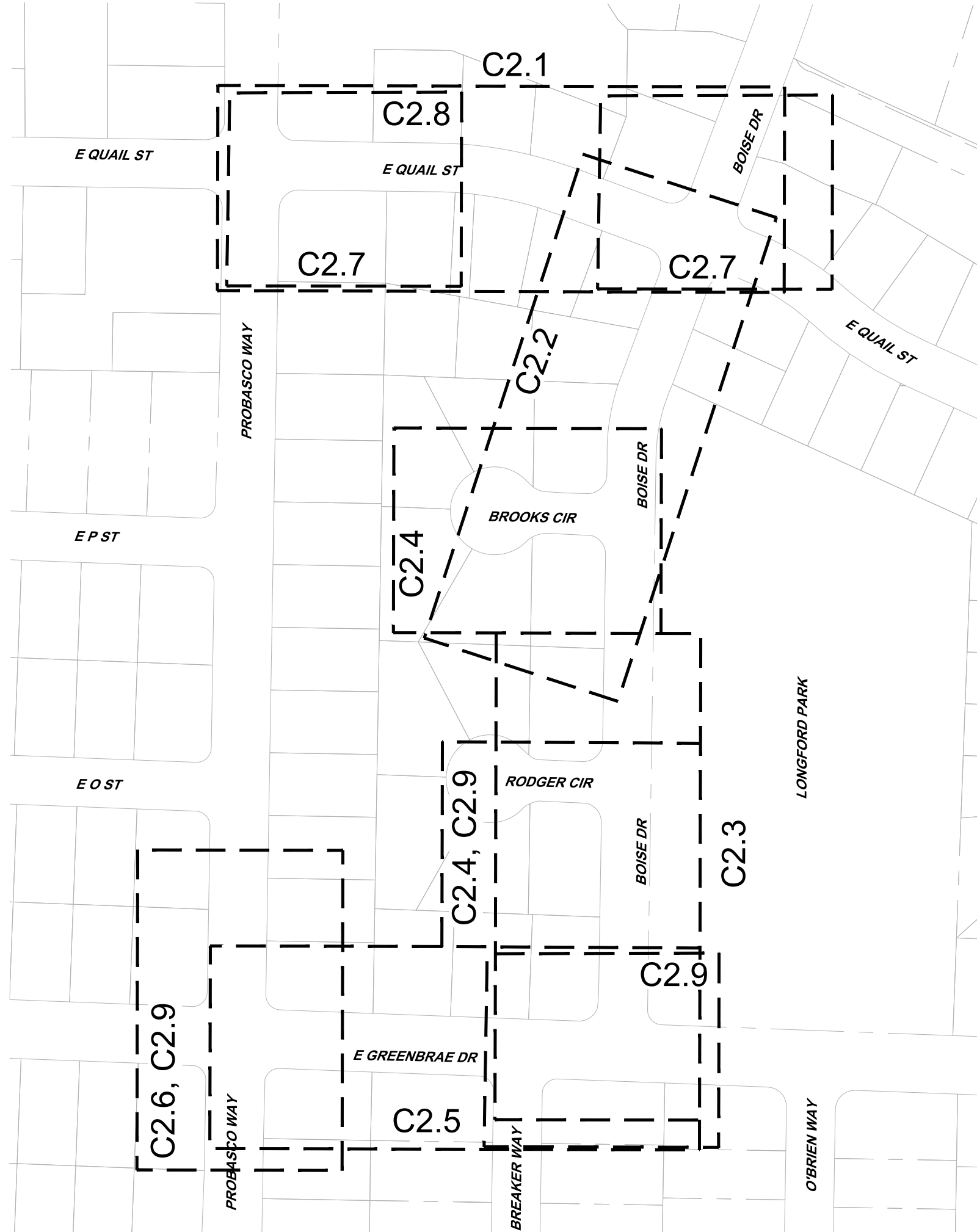
CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 STORM DRAIN CONTROL SHEET
 SPARKS WASHOE NEVADA

REV	DATE	DESCRIPTION

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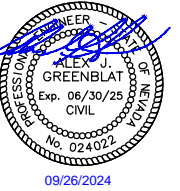


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
SANITARY SEWER SHEET INDEX
SPARKS WASHOE NEVADA

REV	DATE	DESCRIPTION	BY

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NOT FOR CONSTRUCTION
SEPTEMBER 2024



CITY OF SPARKS
**BOISE DRIVE SEWER INTERCEPTOR
REHABILITATION PROJECT**
QUAIL STREET SEWER PLAN
SPARKS
WASHOE
NEVADA

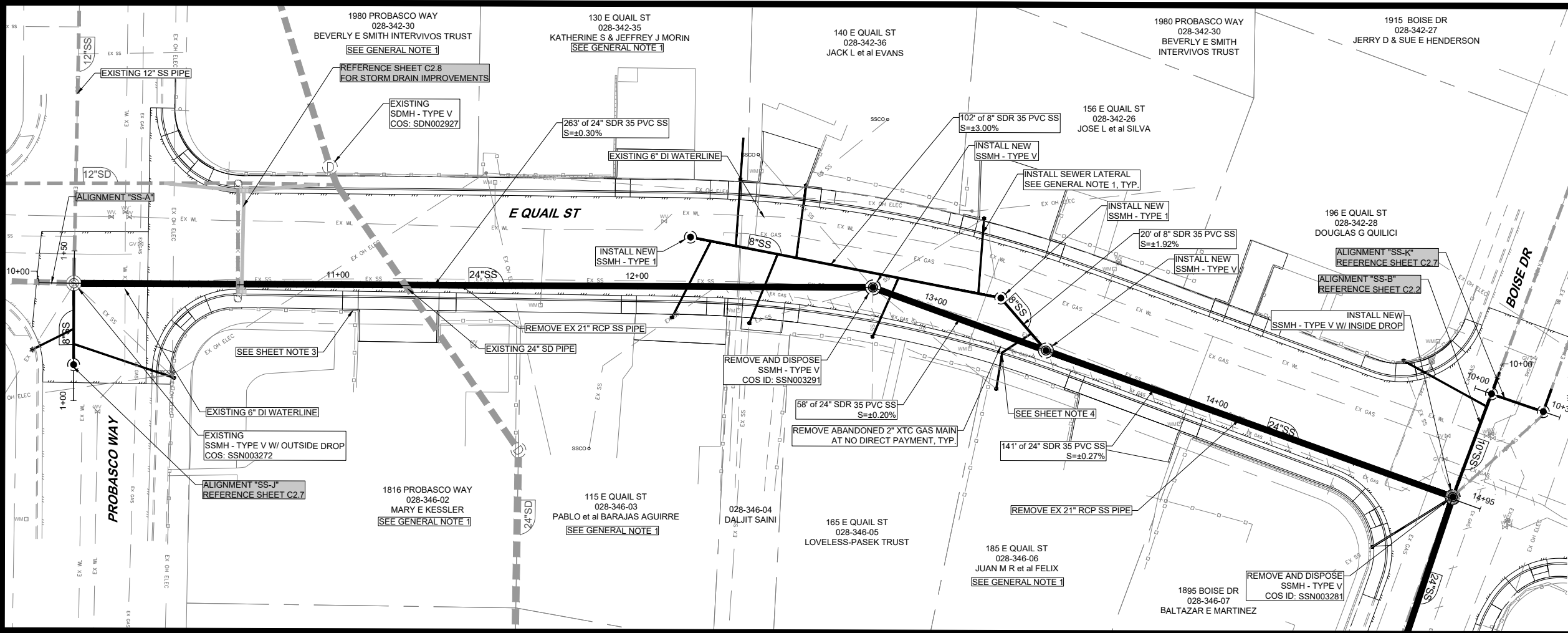
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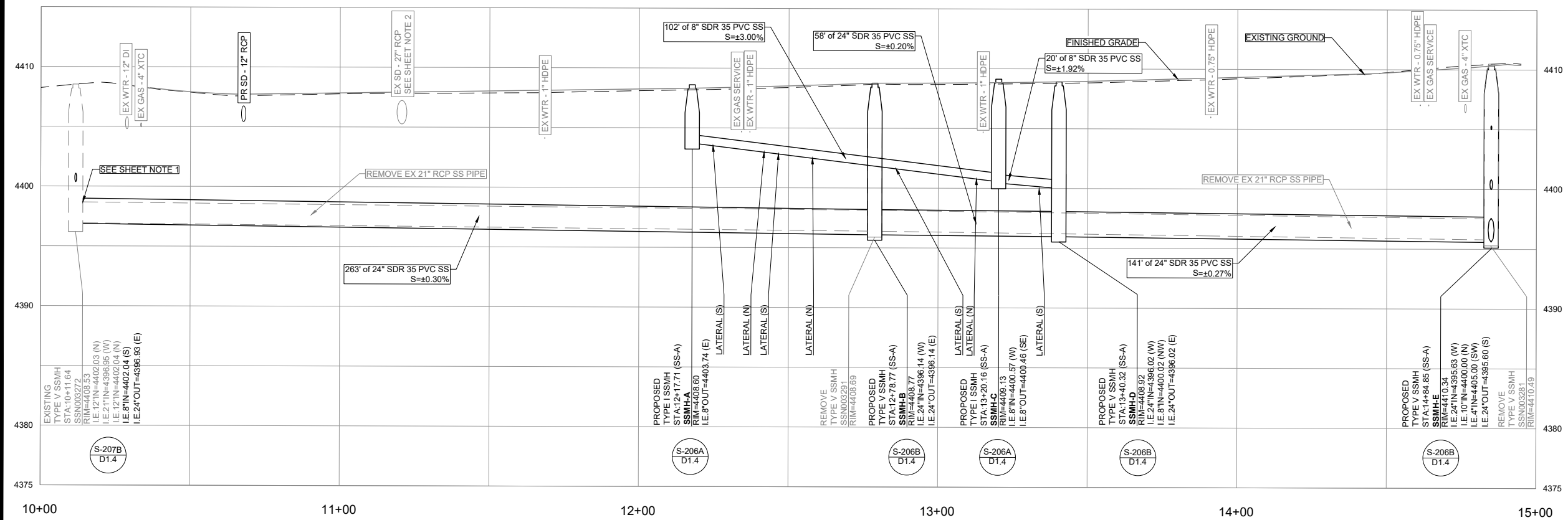
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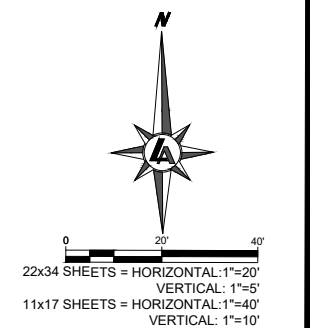
- GENERAL NOTES:**
- LATERAL LOCATIONS ARE SHOWN AS APPROXIMATE BASED ON MANHOLE DIP OBSERVATIONS AND DYE TESTING. CONTRACTOR TO VERIFY THE LATERAL LOCATION, WHETHER THEY ARE ACTIVE OR INACTIVE, AND INSTALL NEW LATERALS AS SHOWN IN PLANS WITH NECESSARY FITTINGS. A NEW CLEANOUT WILL BE PLACED AT BACK OF WALK OR WITHIN SIDEWALK IF PHYSICAL OBSTRUCTION PREVENTS PLACEMENT AT BACK OF WALK. COORDINATE WITH CITY OF SPARKS FOR FINAL CLEANOUT PLACEMENT.
 - PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POTHOLE AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
 - BYPASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR. REFERENCE THE TECHNICAL SPECIFICATIONS FOR REQUIREMENTS.
 - ALL MANHOLE BARREL JOINTS TO BE WRAPPED WITH EXTERNAL JOINT WRAP M-860 OR APPROVED EQUAL. REFER TO SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS REGARDING SEWER INTERCEPTOR CONSTRUCTION.
 - INSIDE DROP MANHOLES ALONG INTERCEPTOR SHALL HAVE INTERIOR PIPE TERMINATE ABOVE THE SPRINGLINE OF THE INTERCEPTOR. NO FITTINGS SHALL BE IN THE FLOW PATH OF THE INTERCEPTOR. REFER TO DETAIL S-207B / D1.4 FOR TYPICAL INSIDE DROP SPECIFICATIONS.



SS-A - STA:10+00 TO STA:15+00



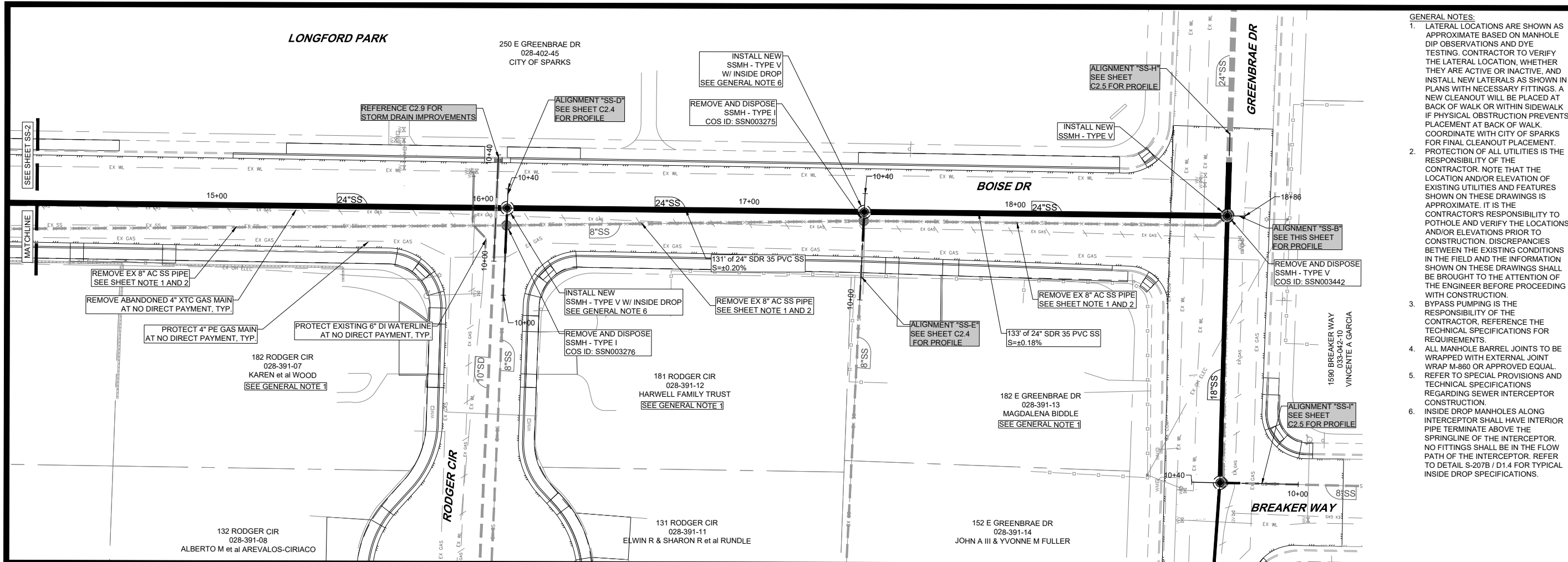
- SHEET NOTES:**
- PIPE CONNECTIONS INTO EXISTING MANHOLES SHALL BE MADE BY CORE DRILLING THE MANHOLE IF NECESSARY AND INSTALLING A WATER TIGHT CONNECTION. SEE DETAILS S-206D/D1.4, S-211A/D1.5, AND S-211C/D1.5. CONTRACTOR TO EXPOSE THE EXISTING MANHOLE AND VERIFY MANHOLE CONDITION IS ADEQUATE FOR CORE DRILLING. MEANS AND METHODS OF THIS CONNECTION CAN BE COORDINATED WITH THE CITY OF SPARKS ONCE EXPOSED AND BASED UPON THE O.D. OF THE EXISTING 21\"/>



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LONGFORD PARK

250 E GREENBRAE DR
028-402-45
CITY OF SPARKS



- GENERAL NOTES:
- LATERAL LOCATIONS ARE SHOWN AS APPROXIMATE BASED ON MANHOLE DIP OBSERVATIONS AND DYE TESTING. CONTRACTOR TO VERIFY THE LATERAL LOCATION, WHETHER THEY ARE ACTIVE OR INACTIVE, AND INSTALL NEW LATERALS AS SHOWN IN PLANS WITH NECESSARY FITTINGS. A NEW CLEANOUT WILL BE PLACED AT BACK OF WALK OR WITHIN SIDEWALK IF PHYSICAL OBSTRUCTION PREVENTS PLACEMENT AT BACK OF WALK. COORDINATE WITH CITY OF SPARKS FOR FINAL CLEANOUT PLACEMENT.
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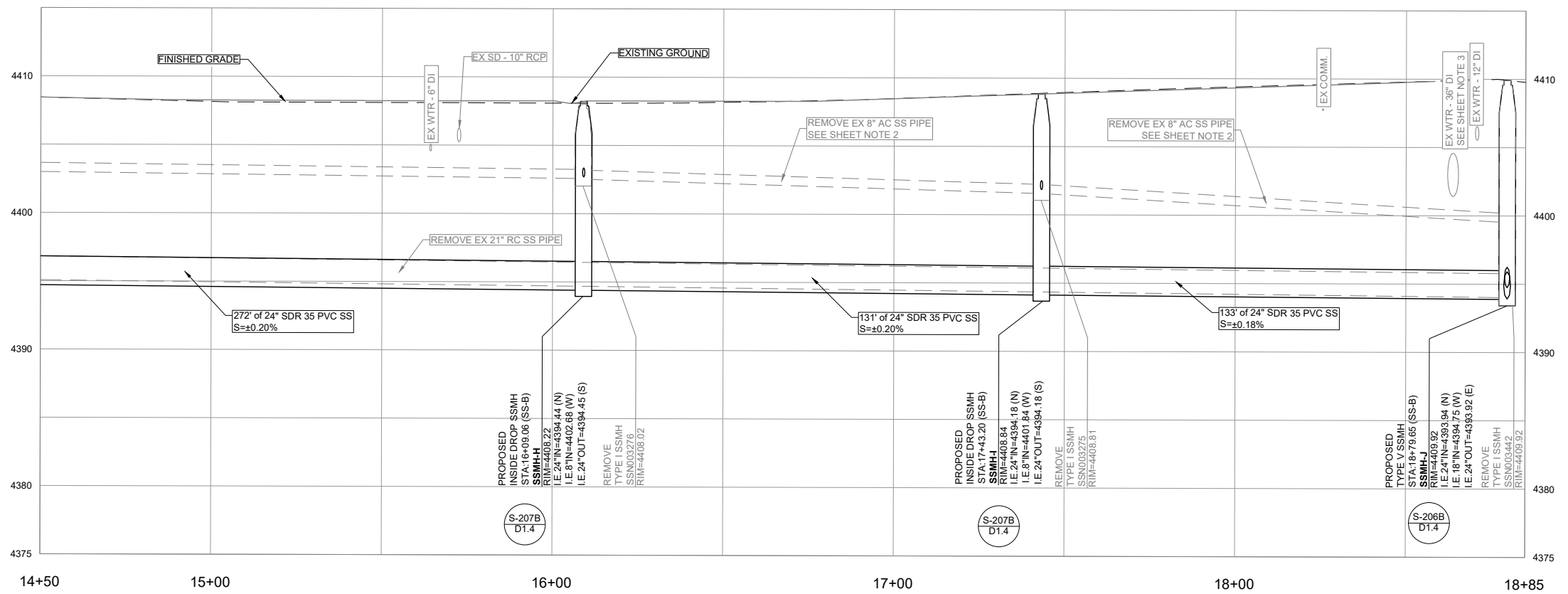
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CITY OF SPARKS
**BOISE DRIVE SEWER INTERCEPTOR
REHABILITATION PROJECT**
BOISE DRIVE SEWER PLAN
SPARKS, NEVADA
WASHOE

SS-B - STA:14+50 TO STA:18+85



- SHEET NOTES:
- PRIOR TO ABANDONMENT OF EXISTING SEWER MAIN, CONTRACTOR SHALL VERIFY ALL ACTIVE LATERALS WHICH MAY BE CONNECTED TO THE EXISTING MAIN, HAVE A MEANS OF BEING TIED OVER TO NEW MAIN. IF AN EXISTING LATERAL IS FOUND TO NOT BE DEPICTED AND CONNECTED INTO THE NEW MAIN, CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY FOR POSSIBLE MITIGATION. ONCE ALL ACTIVE LATERALS ARE TIED OVER, CONTRACTOR SHALL GROUT FILL EXISTING PIPE PRIOR TO ABANDONMENT PER DETAIL C205/D1.6.
 - CONTRACTOR TO VERIFY IF EXISTING PIPE IS ASBESTOS. IF SO, CONTRACTOR SHALL REMOVE AND DISPOSE OF PER THE TECHNICAL SPECIFICATIONS FOR SAFE AND LEGAL DISPOSAL OF ASBESTOS PIPE.
 - SPECIAL PROTECTION OF EXISTING LARGE DIAMETER UTILITIES MAY BE REQUIRED, SUCH AS I-BEAM BRACING. CONTRACTOR TO DETERMINE APPROPRIATE MEANS AND METHODS.

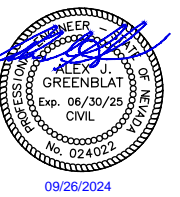


0 20' 40'
22x34 SHEETS = HORIZONTAL: 1"=20'
VERTICAL: 1"=5'
11x17 SHEETS = HORIZONTAL: 1"=40'
VERTICAL: 1"=10'

REV	DATE	DESCRIPTION

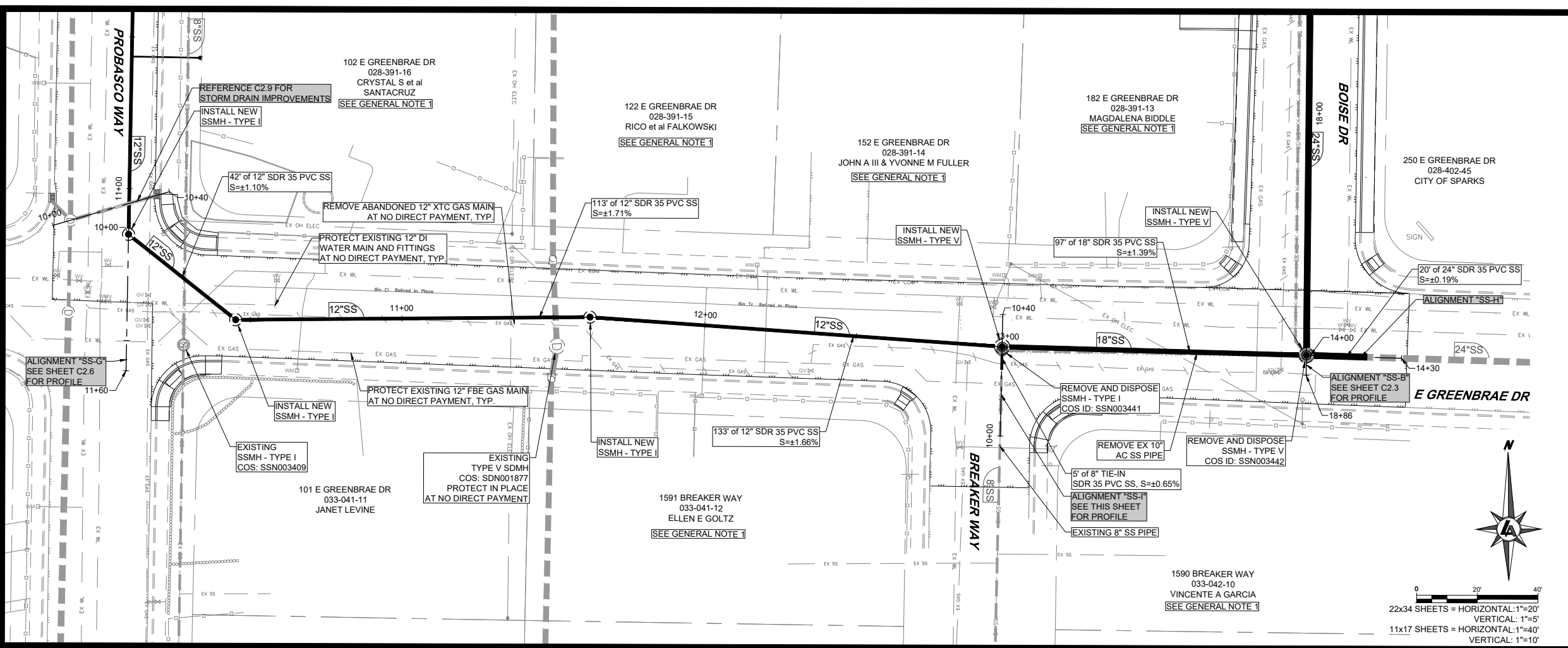
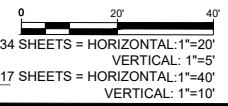
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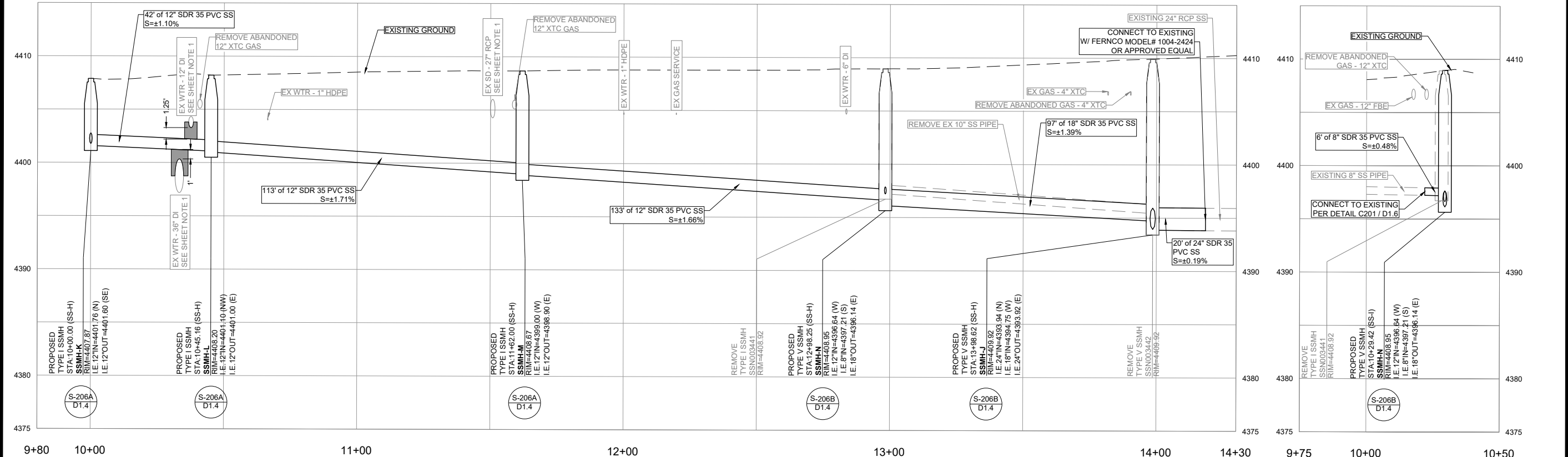
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- SHEET NOTES:**
- CONTRACTOR SHALL SLURRY ENCASE EXISTING 36" DI AND 12" DI WATERLINE AT NO DIRECT PAYMENT. COORDINATE WITH TMWA.



SS-H - STA:9+80 TO STA:14+30

SS-I - STA:9+75 TO STA:10+50



CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 GREENBRAE DRIVE SEWER PLAN
 WASHOE
 SPARKS
 NEVADA

BY: _____

REV	DATE	DESCRIPTION

BAR IS 1/4 INCH ON ORIGINAL DRAWING

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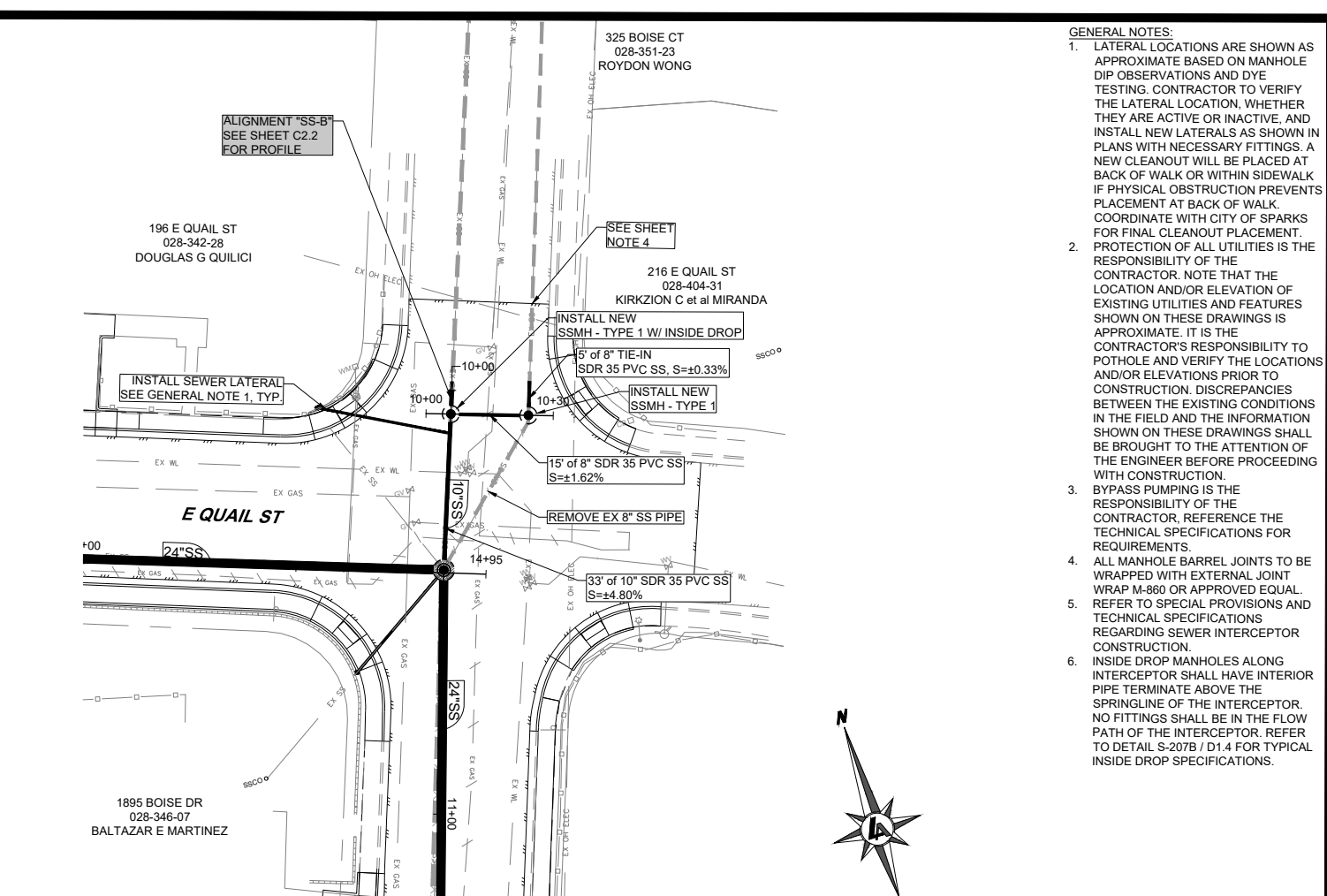
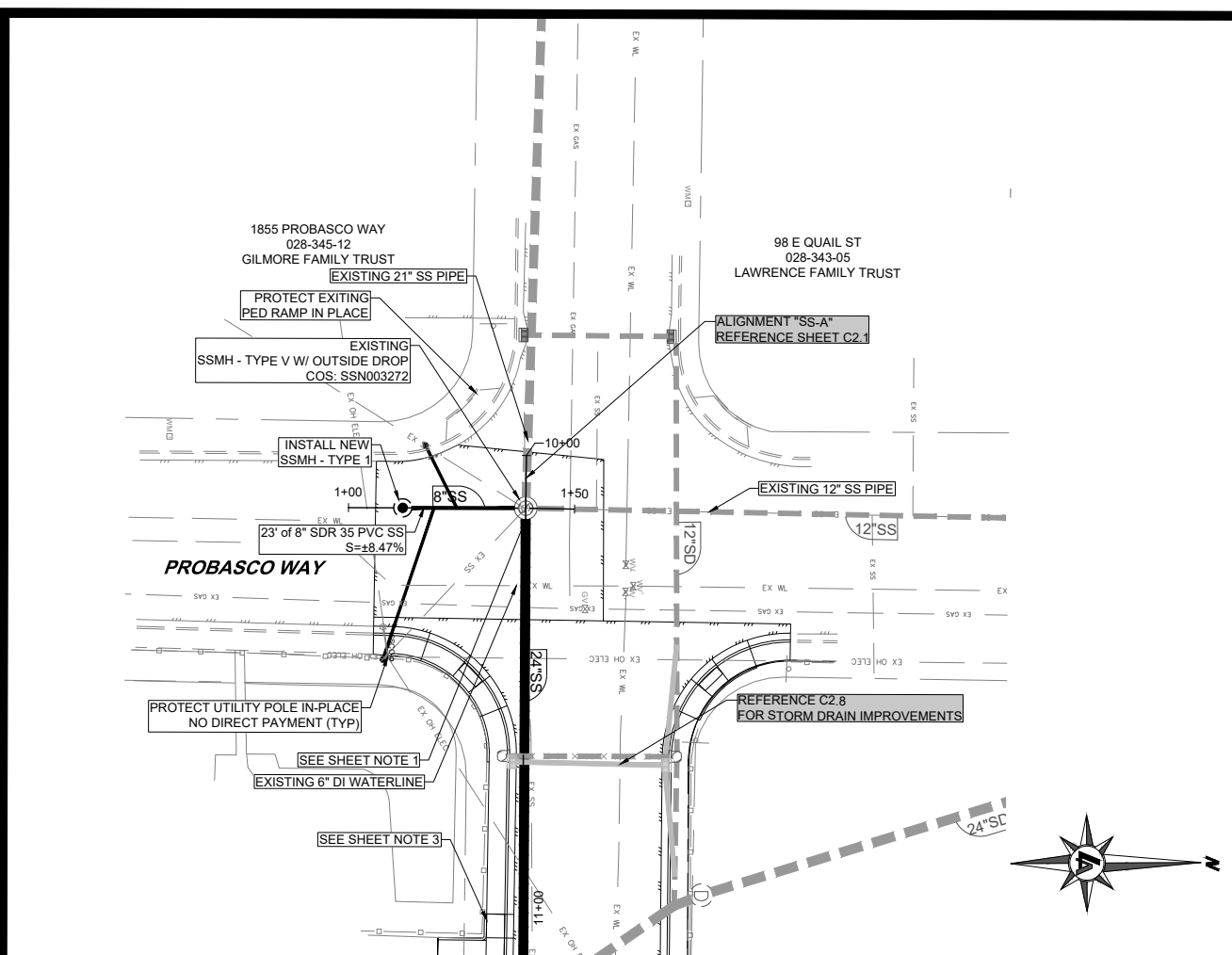
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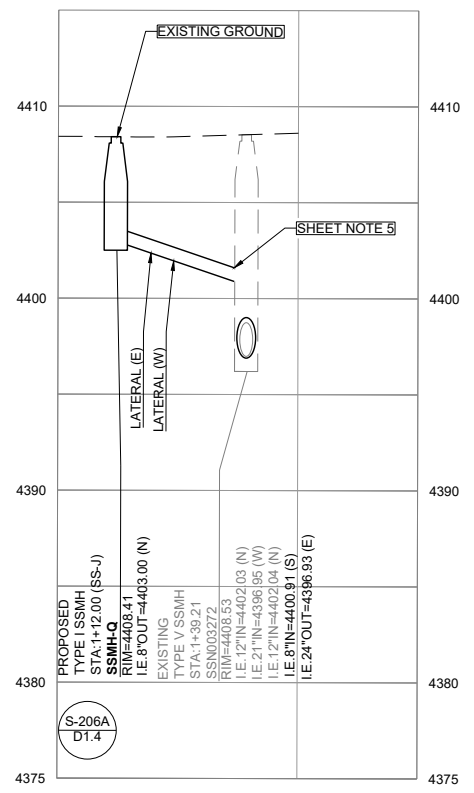
L:\AP\0565.000 - Sewer Rehab - Quail St, Boise Dr. & Greenbrae Dr.\DWG\Sheets\0565000SEWER.dwg,C2.5, 09/26/2024 01:39 pm ohenricksen



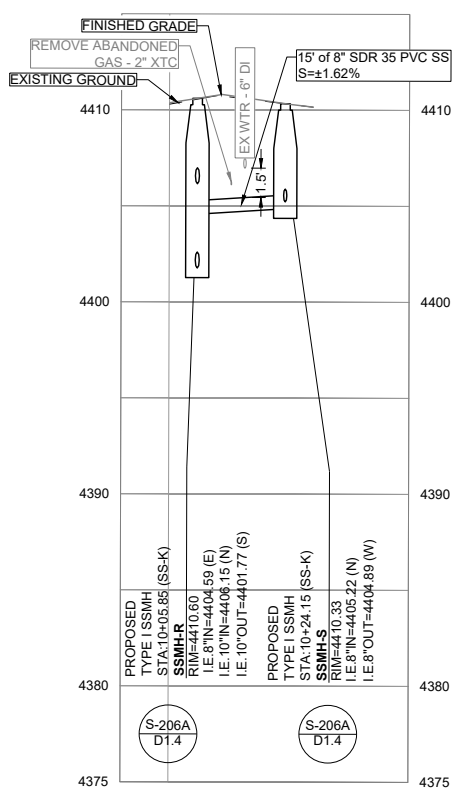
- GENERAL NOTES:**
- LATERAL LOCATIONS ARE SHOWN AS APPROXIMATE BASED ON MANHOLE DIP OBSERVATIONS AND DYE TESTING. CONTRACTOR TO VERIFY THE LATERAL LOCATION, WHETHER THEY ARE ACTIVE OR INACTIVE, AND INSTALL NEW LATERALS AS SHOWN IN PLANS WITH NECESSARY FITTINGS. A NEW CLEANOUT WILL BE PLACED AT BACK OF WALK OR WITHIN SIDEWALK IF PHYSICAL OBSTRUCTION PREVENTS PLACEMENT AT BACK OF WALK. COORDINATE WITH CITY OF SPARKS FOR FINAL CLEANOUT PLACEMENT.
 - PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POTHOLE AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
 - BYPASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR. REFERENCE THE TECHNICAL SPECIFICATIONS FOR REQUIREMENTS.
 - ALL MANHOLE BARREL JOINTS TO BE WRAPPED WITH EXTERNAL JOINT WRAP M-860 OR APPROVED EQUAL.
 - REFER TO SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS REGARDING SEWER INTERCEPTOR CONSTRUCTION.
 - INSIDE DROP MANHOLES ALONG INTERCEPTOR SHALL HAVE INTERIOR PIPE TERMINATE ABOVE THE SPRINGLINE OF THE INTERCEPTOR. NO FITTINGS SHALL BE IN THE FLOW PATH OF THE INTERCEPTOR. REFER TO DETAIL S-207B / D1.4 FOR TYPICAL INSIDE DROP SPECIFICATIONS.



SS-J - STA:1+00 TO STA:1+75



SS-K - STA:9+90 TO STA:10+50



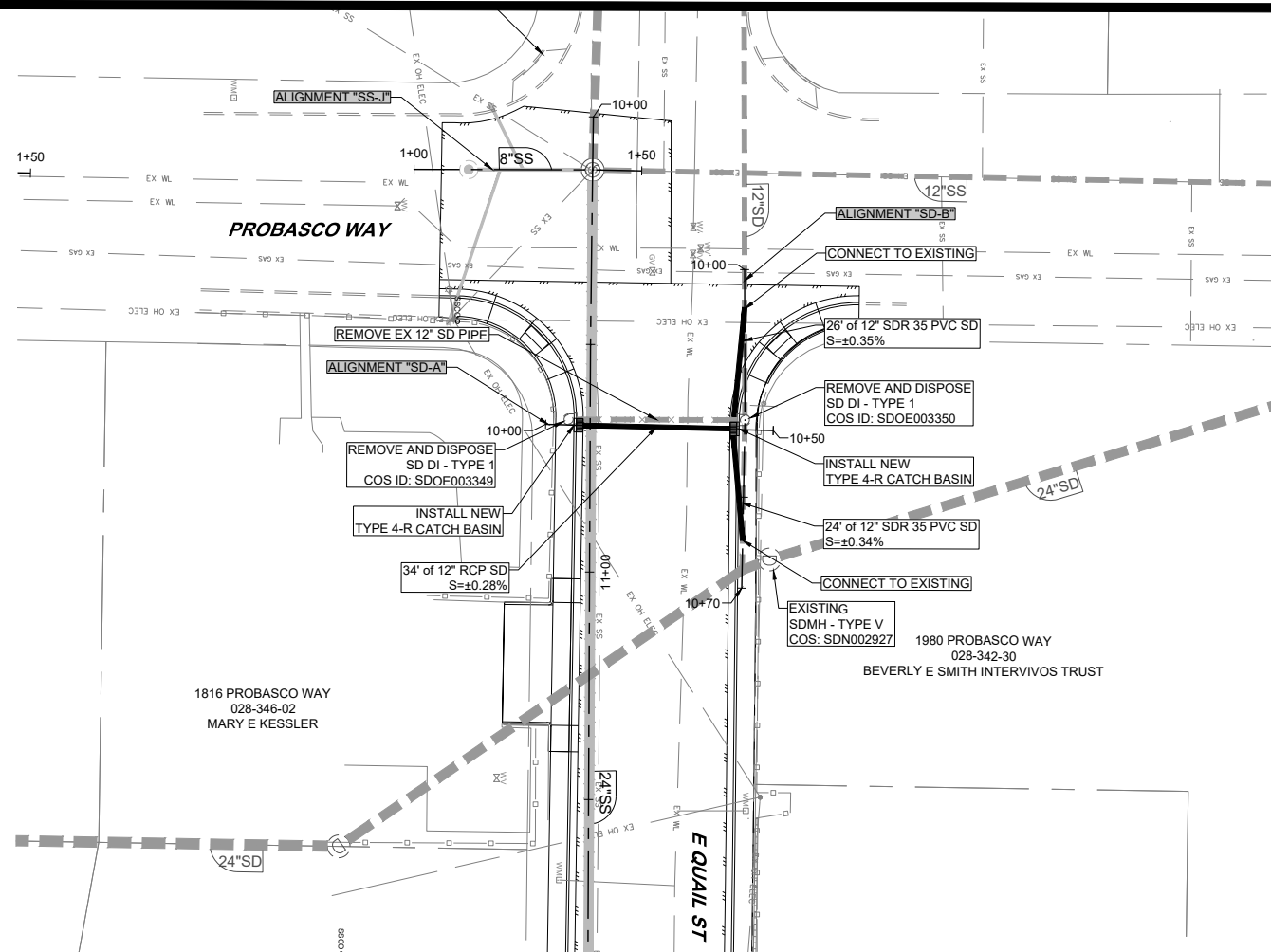
- SHEET NOTES:**
- PIPE CONNECTIONS INTO EXISTING MANHOLES SHALL BE MADE BY CORE DRILLING THE MANHOLE IF NECESSARY AND INSTALLING A WATER TIGHT CONNECTION. SEE DETAILS S-206D/D1.4, S-211A/D1.5, AND S-211C/D1.5. CONTRACTOR TO EXPOSE THE EXISTING MANHOLE AND VERIFY MANHOLE CONDITION IS ADEQUATE FOR CORE DRILLING. MEANS AND METHODS OF THIS CONNECTION CAN BE COORDINATED WITH THE CITY OF SPARKS ONCE EXPOSED AND BASED UPON THE O.D. OF THE EXISTING 21" RCP MAIN AND THE O.D. OF THE PROPOSED 24" PVC MAIN.
 - CONTRACTOR TO VERIFY IF EXISTING PIPE IS ASBESTOS. IF SO, CONTRACTOR SHALL REMOVE AND DISPOSE OF PER THE TECHNICAL SPECIFICATIONS FOR SAFE AND LEGAL DISPOSAL OF ASBESTOS PIPE.
 - CONTRACTOR SHALL LIMIT REMOVALS TO BACK OF WALK FOR SEWER INSTALLATION. PROTECT EXISTING IMPROVEMENTS SUCH AS FENCING, DRIVEWAYS, LANDSCAPING, RETAINING CURBS, ETC. IN PLACE. IF THE CONTRACTOR BASED UPON MEANS AND METHODS, REMOVES EXISTING IMPROVEMENTS BEYOND THE BACK OF WALK, THEY SHALL BE REPLACED IN KIND AT NO DIRECT PAYMENT.
 - LOCATION AND DEPTH OF EXISTING 8" LINE UNKNOWN. CONTRACTOR TO POTHOLE PRIOR TO PURCHASING MANHOLE.
 - CORE PROPOSED MAIN INTO EXISTING MANHOLE BARREL AND MAKE WATERTIGHT CONNECTION.

CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
PROBASCO AND BOISE SEWER PLAN
SPARKS, NEVADA

REV	DATE	DESCRIPTION

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JOB NO.: 10565.000

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GENERAL NOTES:
 1. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POTHOLE AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.



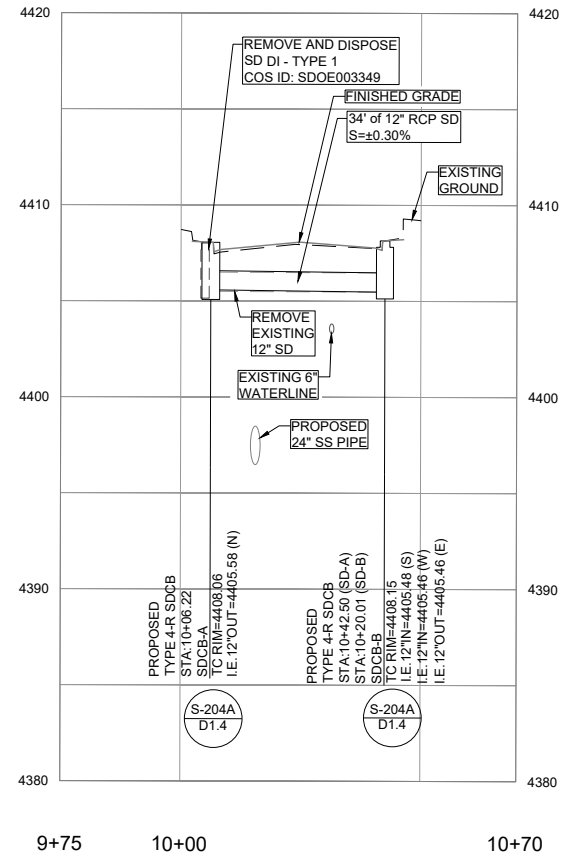
950 SANDHILL ROAD, SUITE 100
 RENO, NV 89521
 TEL: 775-827-6111
 WWW.LUMOSINC.COM
 INFO@LUMOSINC.COM

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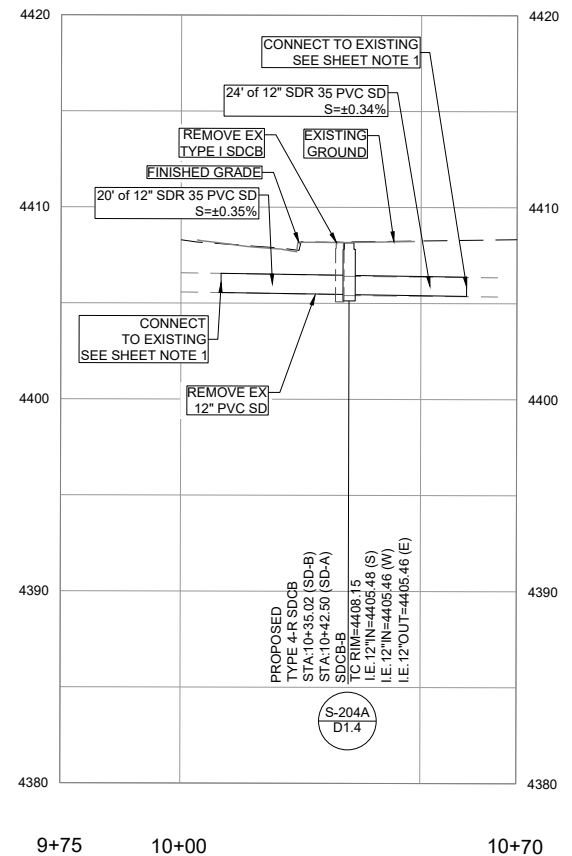


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
QUAIL STREET STORM DRAIN PLAN
 SPARKS
 WASHOE
 NEVADA

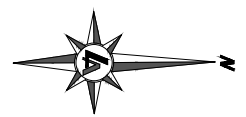
SD-A - STA:9+75 TO STA:10+70



SD-B - STA:9+75 TO STA:10+70



SHEET NOTES:
 1. PIPE CONNECTIONS TO EXISTING 12" PVC STORM DRAIN PIPE MAY REQUIRE 11.25° BENDS OR DEFLECTION AT JOINTS TO TIE-IN. CONTRACTOR TO VERIFY ALIGNMENT AND CONNECT AS NECESSARY USING A FERNCO MODEL# 1056-1212 OR APPROVED EQUAL. FIELD FIT OF THESE CONNECTIONS IS LIKELY. COORDINATE WITH CITY OF SPARKS.



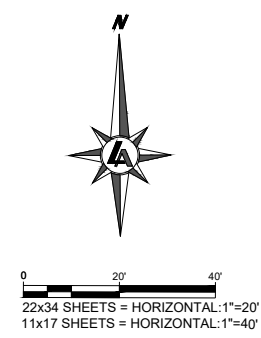
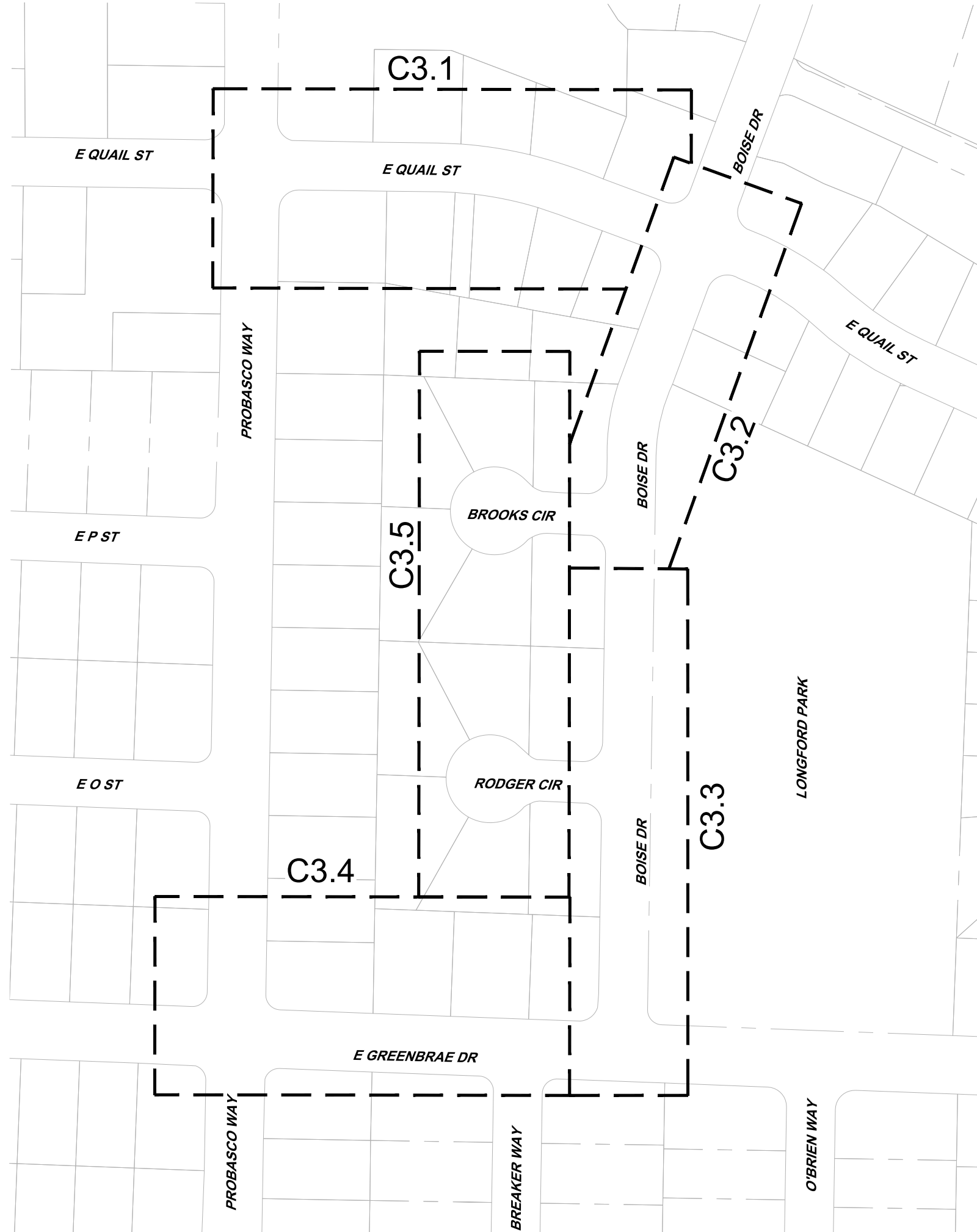
0 20' 40'
 22x34 SHEETS = HORIZONTAL: 1"=20'
 VERTICAL: 1"=5'
 11x17 SHEETS = HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

REV	DATE	DESCRIPTION

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 SEPTEMBER 2024

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CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 SURFACE IMPROVEMENT SHEET INDEX
 SPARKS WASHOE NEVADA

REV	DATE	DESCRIPTION	BY

BAR IS 1 INCH ON ORIGINAL DRAWING
 0 1'
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 JOB NO.: 10565.000

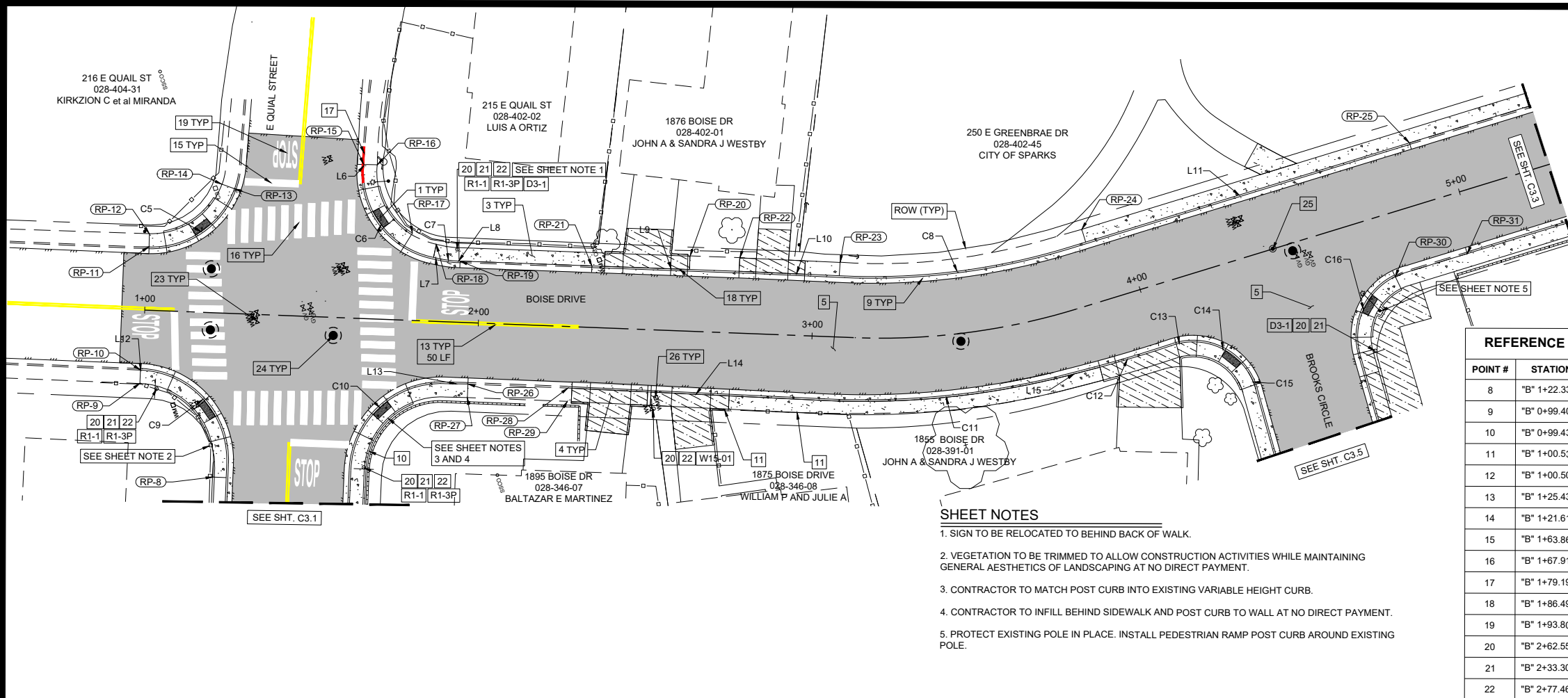
BID SET
 NOT FOR CONSTRUCTION
 SEPTEMBER 2024



CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
 BOISE DRIVE SURFACE IMPROVEMENT PLAN
 WASHOE
 NEVADA
 SPARKS

BY: _____
 DESCRIPTION: _____
 REV: _____ DATE: _____
BID SET
 NOT FOR CONSTRUCTION
 SEPTEMBER 2024

BAR IS 1 INCH ON ORIGINAL DRAWING
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C3.2
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 DESIGNED BY: TDA / RHH
 CHECKED BY: AJG
 JOB NO.: 10565.000



LINE TABLE		
LINE #	LENGTH	DIRECTION
L6	0.74	N68° 40' 15.36"W
L7	2.39	S30° 05' 10.43"W
L8	0.86	S19° 57' 32.22"W
L9	47.50	S19° 57' 32.22"W
L10	27.69	S20° 27' 12.17"W
L11	106.66	S0° 47' 56.08"W
L12	0.15	S20° 35' 46.32"W
L13	7.00	S18° 38' 25.01"W
L14	76.71	N20° 38' 30.04"E
L15	4.60	N3° 28' 33.41"E

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C5	33.07	26.50	71.50
C6	36.87	26.00	81.24
C7	5.30	30.00	10.13
C8	68.61	200.00	19.65
C9	42.20	27.00	89.56
C10	42.40	27.00	89.97
C11	73.40	245.00	17.17
C12	28.36	396.00	4.10
C13	4.22	19.50	12.40
C14	22.65	19.50	66.54
C15	4.73	19.50	13.89
C16	27.91	20.00	79.96

REFERENCE POINT (RP) TABLE		
POINT #	STATION/OFFSET	DESCRIPTION
8	"B" 1+22.33, 49.21' RT	BEGIN SW
9	"B" 0+99.40, 22.02' RT	END SW
10	"B" 0+99.43, 18.02' RT	END C&G
11	"B" 1+00.53, 19.02' LT	BEGIN C&G
12	"B" 1+00.50, 22.93' LT	BEGIN SW
13	"B" 1+25.43, 37.37' LT	END C&G
14	"B" 1+21.61, 38.59' LT	END SW
15	"B" 1+63.86, 46.13' LT	BEGIN C&G
16	"B" 1+67.91, 46.21' LT	BEGIN SW
17	"B" 1+79.19, 26.14' LT	END SW
18	"B" 1+86.49, 23.05' LT	BEGIN SW
19	"B" 1+93.80, 18.35' LT	END C&G
20	"B" 2+62.55, 22.49' LT	END SW
21	"B" 2+33.30, 18.43' LT	BEGIN C&G
22	"B" 2+77.46, 22.52' LT	BEGIN SW

REFERENCE POINT (RP) TABLE		
POINT #	STATION/OFFSET	DESCRIPTION
23	"B" 3+07.54, 22.36' LT	END SW
24	"B" 3+88.58, 22.37' LT	BEGIN SW
25	"B" 4+89.99, 18.42' LT	END C&G
26	"B" 1+97.58, 18.37' RT	END C&G
27	"B" 1+97.57, 22.44' RT	END SW
28	"B" 2+27.58, 18.41' RT	BEGIN C&G
29	"B" 2+27.57, 22.41' RT	BEGIN SW
30	"B" 4+74.19, 18.65' RT	END C&G
31	"B" 4+96.84, 18.40' RT	BEGIN C&G

- SHEET NOTES**
- SIGN TO BE RELOCATED TO BEHIND BACK OF WALK.
 - VEGETATION TO BE TRIMMED TO ALLOW CONSTRUCTION ACTIVITIES WHILE MAINTAINING GENERAL AESTHETICS OF LANDSCAPING AT NO DIRECT PAYMENT.
 - CONTRACTOR TO MATCH POST CURB INTO EXISTING VARIABLE HEIGHT CURB.
 - CONTRACTOR TO INFILL BEHIND SIDEWALK AND POST CURB TO WALL AT NO DIRECT PAYMENT.
 - PROTECT EXISTING POLE IN PLACE. INSTALL PEDESTRIAN RAMP POST CURB AROUND EXISTING POLE.

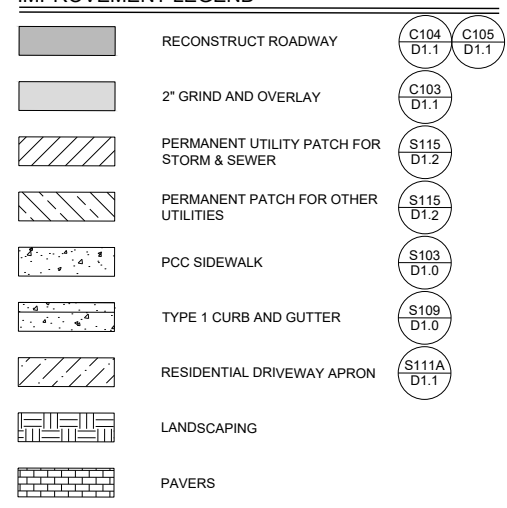
SHEET C3.2 QUANTITIES

NO.	DESCRIPTION	UNIT	QTY.	DETAIL	SHEET
1	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP	EA	6	S-106	D1.0
2	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP LANDING AND TRUNCATED DOMES ONLY	EA	-	S-106	D1.0
3	REMOVE AND REPLACE PCC SIDEWALK	SF	1,960	S-103	D1.0
4	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY APRON AND TRANSITION	SF	1,590	S-111	D1.1
5	RECONSTRUCT SECTION: PULVERIZE EXISTING ROADWAY, INSTALL 4-INCH ASPHALT ON 8-INCH AGGREGATE BASE	SF	19,110	C104	D1.1
6	PERFORM 2" GRIND AND OVERLAY	SF	-	C103	D1.1
7	PERMANENT BITUMINOUS FULL PAVEMENT PATCH (OTHER UTILITIES)	SF	-	-	-
8	PERMANENT BITUMINOUS PAVEMENT PATCH (SANITARY SEWER & STORM DRAIN)	LF	-	S-115	D1.2
9	REMOVE AND REPLACE PCC TYPE 1 CURB AND GUTTER	LF	630	S-109	D1.0
10	REMOVE AND REPLACE PCC POST CURB	LF	20	C100	D1.0
11	REMOVE AND REPLACE FENCE	LF	13	C110/C111	D1.3
12	INSTALL 4" BROKEN YELLOW PAVEMENT STRIPING	LF	-	-	-
13	INSTALL 4" DOUBLE SOLID YELLOW PAVEMENT STRIPING	LF	168	-	-
14	INSTALL 6" SOLID WHITE PAVEMENT STRIPING	LF	-	-	-
15	INSTALL 24" SOLID WHITE THERMOPLASTIC STOP BAR	LF	69	-	-
16	INSTALL 2' x 10' SOLID WHITE THERMOPLASTIC CROSSWALK KEYS	LF	410	S-411	D1.3
17	INSTALL RED CURB PAINT	LF	11	-	-
18	INSTALL THERMOPLASTIC YIELD TRIANGLES	EA	-	S-411	D1.3
19	INSTALL PREFORMED SOLID WHITE THERMOPLASTIC WORD LEGENDS - "STOP"	EA	4	-	-
20	FURNISH AND INSTALL NEW BASE, ANCHOR, AND POST	EA	5	S-401	D1.3
21	FURNISH AND INSTALL NEW STREET NAME SIGN	EA	4	-	-
22	FURNISH AND INSTALL NEW TRAFFIC SIGN ASSEMBLY	EA	4	-	-
23	PROTECT AND ADJUST EXISTING GAS AND WATER VALVE BOX TO FINISH GRADE	EA	18	C302	D1.7
24	PROTECT AND ADJUST MANHOLE STRUCTURE (NEW OR EXISTING) TO FINISH GRADE WITH NEW PCC COLLAR, AND PROVIDE NEW 24" CITY OF SPARKS LOGO COVER WITH, WHEN REQUIRED, A NEW 36" FRAME AND ADAPTOR	EA	3	S-209/S-210	D1.5
25	RECONSTRUCT SURVEY MONUMENT	EA	1	S-118	D1.3
26	PROTECT AND ADJUST EXISTING STANDARD OR SINGLE WATER METER BOX TO NEW FINISH GRADE (CONTINGENT ITEM)	EA	2	-	-
27	REMOVE AND REPLACE EXISTING TYPE 1 CATCH BASIN WITH TYPE 4R CATCH BASIN	EA	-	S-204	D1.4
28	PROTECT AND RESET EXISTING CATCH BASIN	EA	-	-	-
29	INSTALL SIDEWALK CROSS DRAIN	EA	-	S-105	-
30	REMOVE AND REPLACE PAVERS	SF	-	-	-

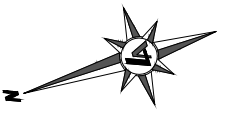
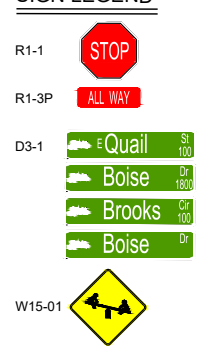
SURFACE IMPROVEMENT NOTES

- TEMPORARY PATCHES SHALL BE 3" HMA. COLD MIX NOT APPROVED. ALL AREAS MUST RECEIVE TEMPORARY PATCHES PRIOR TO OPENING TO TRAFFIC PER DETAIL S116/D1.2.
- WHEN PATCH IS LOCATED 24" OR LESS FROM CURB LINE, REPLACE TO THE CURB LINE, PER DETAIL S115/D1.2.
- SURFACE RESTORATION LIMITS ARE ESTIMATED AS SHOWN AND SHALL NOT BE CONSIDERED A MAXIMUM OR MINIMUM AREA. CONTRACTOR SHALL EVALUATE CONSTRUCTION METHODS, DESIGN DETAILS, EQUIPMENTS, SOILS, AND OTHER CONDITIONS TO DETERMINE QUANTITIES.
- PROTECT ALL EXISTING LANDSCAPE, STRUCTURES, TREES, UTILITIES, FENCING, BOXES, POLE, ETC. IN PLACE UNLESS NOTED OTHERWISE. IF DAMAGE IS CAUSED BY CONTRACTOR, THEN IT SHALL BE REPLACED AT NO DIRECT PAYMENT.
- UNLESS OTHERWISE NOTED, PROTECT AND ADJUST ALL EXISTING UTILITY MANHOLE FRAME AND COVER, VALVE BOXES, AND VAULT COVERS TO NEW FINISH GRADE WITHIN RESTORATION LIMITS.
- PAVEMENT PATCHING SHALL MATCH EXISTING THICKNESS, BUT SHALL BE NO MORE THAN 8" AND NO LESS THAN 4". REFER TO PATCHING DETAILS ON SHEET D1.2, GEOTECHNICAL LOGS, & BORE/TEST PITS SUMMARY TABLES ON GRADING SHEETS. THERE ARE VARIATIONS IN EXISTING AC THICKNESS.
- CONTRACTOR TO COORDINATE WITH TMWA ON CONDITION OF EXISTING BOXES FOR PROTECTION OR REPLACEMENT. EXISTING NON-TRAFFIC RATED BOXES WITHIN PROPOSED DRIVEWAY APRONS OR WINGS ARE TO BE REPLACED WITH NEW TRAFFIC RATED BOXES. CONTRACTOR SHALL BE REQUIRED TO ATTEND PRE-CONSTRUCTION WALK WITH THE TMWA INSPECTOR TO ESTABLISH MUTUAL AGREEMENT ON WATER METER ADJUSTMENTS. REFERENCE SECTION SECTION 19 OF THE SPECIAL PROVISIONS.
- SURFACE IMPROVEMENTS ARE NOT SHOWN FOR LATERAL REPLACEMENTS DUE TO THE ACTUAL LOCATION NOT BEING KNOWN. SURFACE IMPROVEMENTS (CONCRETE, PERMANENT PATCH, ETC) TO INSTALL NEW SEWER LATERAL IS INCLUDED IN THE REMOVE AND REPLACE ACTIVE LATERAL BID ITEM.

IMPROVEMENT LEGEND

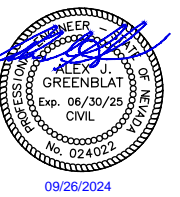


SIGN LEGEND

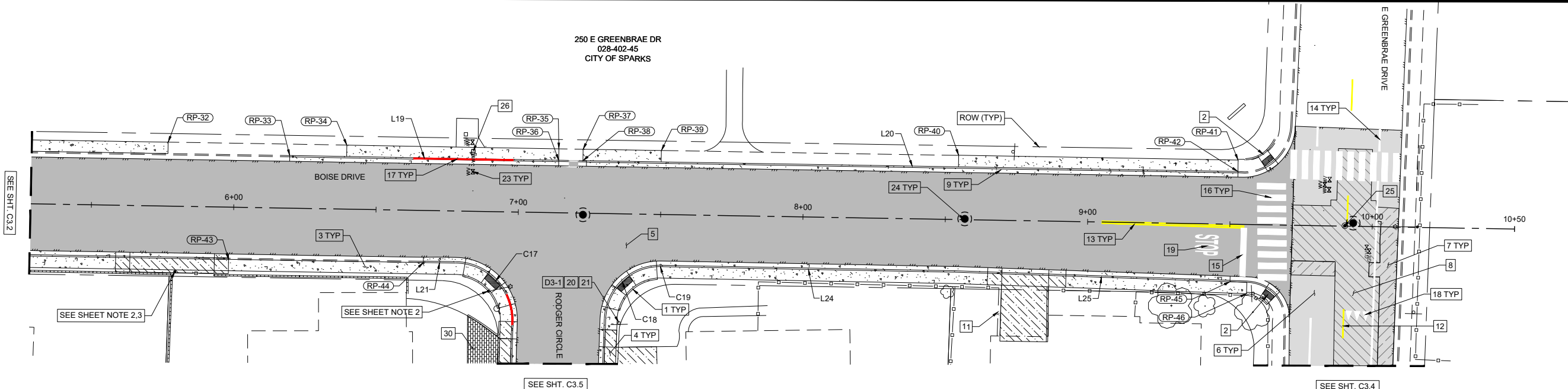


0 20' 40'
 22x34 SHEETS = HORIZONTAL: 1"=20'
 11x17 SHEETS = HORIZONTAL: 1"=40'

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09/26/2024



LINE TABLE		
LINE #	LENGTH	DIRECTION
L19	94.50	S0° 51' 45.03"W
L20	228.89	S0° 48' 04.65"W
L21	11.38	N0° 47' 42.15"E
L24	103.75	S0° 55' 51.93"W
L25	102.21	S1° 50' 22.78"W

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	
C17	31.65	20.00	90.68	
C18	29.22	19.00	88.13	
C19	0.31	19.00	0.93	

REFERENCE POINT (RP) TABLE		
POINT #	STATION/OFFSET	DESCRIPTION
32	"GB" 4+93.44, 414.39' LT	END SW
33	"GB" 4+90.36, 371.53' LT	BEGIN C&G
34	"GB" 4+94.78, 351.62' LT	BEGIN SW
35	"GB" 4+96.30, 277.13' LT	END SW
36	"GB" 4+92.30, 277.04' LT	END C&G
37	"GB" 4+96.49, 268.63' LT	BEGIN SW

REFERENCE POINT (RP) TABLE		
POINT #	STATION/OFFSET	DESCRIPTION
38	"GB" 4+92.49, 268.54' LT	BEGIN C&G
39	"GB" 4+97.09, 241.14' LT	END SW
40	"GB" 4+99.39, 136.72' LT	BEGIN SW
41	"GB" 5+01.42, 38.56' LT	END SW
42	"GB" 4+97.42, 38.49' LT	END C&G
43	"GB" 4+53.10, 391.62' LT	END C&G

REFERENCE POINT (RP) TABLE		
POINT #	STATION/OFFSET	DESCRIPTION
44	"GB" 4+54.57, 323.21' LT	BEGIN C&G
45	"GB" 4+58.60, 39.79' LT	END C&G
46	"GB" 4+54.63, 33.84' LT	END SW

- SHEET NOTES**
1. INSTALLED POST CURB TO MATCH HEIGHT OF EXISTING VARIABLE HEIGHT CURB AT BACK OF WALK.
 2. POWER POLE TO BE PROTECTED IN PLACE.
 3. 1' TRANSITION AT BACK OF WALK NOT TO INTERFERE WITH GATE TRACKS OR WALL.

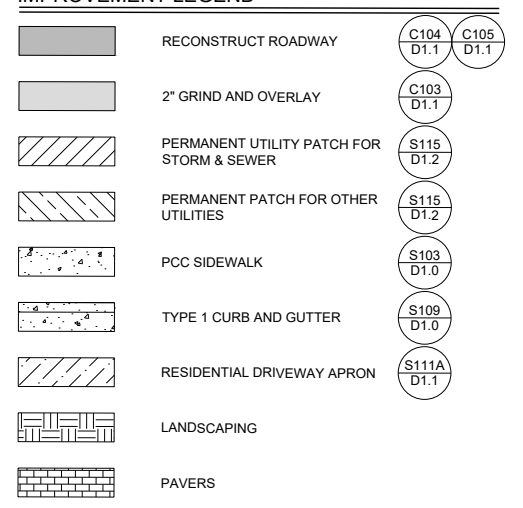
SHEET C3.3 QUANTITIES

NO.	DESCRIPTION	UNIT	QTY.	DETAIL	SHEET
1	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP	EA	2	S-106	D1.0
2	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP LANDING AND TRUNCATED DOMES ONLY	EA	2	S-106	D1.0
3	REMOVE AND REPLACE PCC SIDEWALK	SF	2,211	S-103	D1.0
4	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY APRON AND TRANSITION	SF	825	S-111	D1.1
5	RECONSTRUCT SECTION: PULVERIZE EXISTING ROADWAY, INSTALL 4-INCH ASPHALT ON 8-INCH AGGREGATE BASE	SF	16,093	C104	D1.1
6	PERFORM 2" GRIND AND OVERLAY	SF	3,104	C103	D1.1
7	PERMANENT BITUMINOUS FULL PAVEMENT PATCH (OTHER UTILITIES)	SF	430	-	-
8	PERMANENT BITUMINOUS PAVEMENT PATCH (SANITARY SEWER & STORM DRAIN)	LF	90	S-115	D1.2
9	REMOVE AND REPLACE PCC TYPE 1 CURB AND GUTTER	LF	651	S-109	D1.0
10	REMOVE AND REPLACE PCC POST CURB	LF	-	C100	D1.0
11	REMOVE AND REPLACE FENCE	LF	17	C110/C111	D1.3
12	INSTALL 4" BROKEN YELLOW PAVEMENT STRIPING	LF	101	-	-
13	INSTALL 4" DOUBLE SOLID YELLOW PAVEMENT STRIPING	LF	50	-	-
14	INSTALL 6" SOLID WHITE PAVEMENT STRIPING	LF	97	-	-
15	INSTALL 24" SOLID WHITE THERMOPLASTIC STOP BAR	LF	17	-	-
16	INSTALL 2' x 10' SOLID WHITE THERMOPLASTIC CROSSWALK KEYS	LF	190	S-411	D1.3
17	INSTALL RED CURB PAINT	LF	46	-	-
18	INSTALL THERMOPLASTIC YIELD TRIANGLES	EA	3	S-411	D1.3
19	INSTALL PREFORMED SOLID WHITE THERMOPLASTIC WORD LEGENDS - "STOP"	EA	1	-	-
20	FURNISH AND INSTALL NEW BASE, ANCHOR, AND POST	EA	1	S-401	D1.3
21	FURNISH AND INSTALL NEW STREET NAME SIGN	EA	1	-	-
22	FURNISH AND INSTALL NEW TRAFFIC SIGN ASSEMBLY	EA	-	-	-
23	PROTECT AND ADJUST EXISTING GAS AND WATER VALVE BOX TO FINISH GRADE	EA	6	C302	D1.7
24	PROTECT AND ADJUST MANHOLE STRUCTURE (NEW OR EXISTING) TO FINISH GRADE WITH NEW PCC COLLAR, AND PROVIDE NEW 24" CITY OF SPARKS LOGO COVER WITH, WHEN REQUIRED, A NEW 36" FRAME AND ADAPTOR	EA	3	S-209/S-210	D1.5
25	RECONSTRUCT SURVEY MONUMENT	EA	1	S-118	D1.3
26	PROTECT AND ADJUST EXISTING STANDARD OR SINGLE WATER METER BOX TO NEW FINISH GRADE (CONTINGENT ITEM)	EA	1	-	-
27	REMOVE AND REPLACE EXISTING TYPE 1 CATCH BASIN WITH TYPE 4R CATCH BASIN	EA	-	S-204	D1.4
28	PROTECT AND RESET EXISTING CATCH BASIN	EA	-	-	-
29	INSTALL SIDEWALK CROSS DRAIN	EA	-	S-105	-
30	REMOVE AND REPLACE PAVERS	SF	144	-	-

SURFACE IMPROVEMENT NOTES

- TEMPORARY PATCHES SHALL BE 3" HMA. COLD MIX NOT APPROVED. ALL AREAS MUST RECEIVE TEMPORARY PATCHES PRIOR TO OPENING TO TRAFFIC PER DETAIL S116/D1.2.
- WHEN PATCH IS LOCATED 24" OR LESS FROM CURB LINE, REPLACE TO THE CURB LINE, PER DETAIL S115/D1.2.
- SURFACE RESTORATION LIMITS ARE ESTIMATED AS SHOWN AND SHALL NOT BE CONSIDERED A MAXIMUM OR MINIMUM AREA. CONTRACTOR SHALL EVALUATE CONSTRUCTION METHODS, DESIGN DETAILS, EQUIPMENTS, SOILS, AND OTHER CONDITIONS TO DETERMINE QUANTITIES.
- PROTECT ALL EXISTING LANDSCAPE, STRUCTURES, TREES, UTILITIES, FENCING, BOXES, POLE, ETC. IN PLACE UNLESS NOTED OTHERWISE. IF DAMAGE IS CAUSED BY CONTRACTOR, THEN IT SHALL BE REPLACED AT NO DIRECT PAYMENT.
- UNLESS OTHERWISE NOTED, PROTECT AND ADJUST ALL EXISTING UTILITY MANHOLE FRAME AND COVER, VALVE BOXES, AND VAULT COVERS TO NEW FINISH GRADE WITHIN RESTORATION LIMITS.
- PAVEMENT PATCHING SHALL MATCH EXISTING THICKNESS, BUT SHALL BE NO MORE THAN 8" AND NO LESS THAN 4". REFER TO PATCHING DETAILS ON SHEET D1.2, GEOTECHNICAL LOGS, & BORE/TEST PITS SUMMARY TABLES ON GRADING SHEETS. THERE ARE VARIATIONS IN EXISTING AC THICKNESS.
- CONTRACTOR TO COORDINATE WITH TMWA ON CONDITION OF EXISTING BOXES FOR PROTECTION OR REPLACEMENT. EXISTING NON-TRAFFIC RATED BOXES WITHIN PROPOSED DRIVEWAY APRONS OR WINGS ARE TO BE REPLACED WITH NEW TRAFFIC RATED BOXES. CONTRACTOR SHALL BE REQUIRED TO ATTEND PRE-CONSTRUCTION WALK WITH THE TMWA INSPECTOR TO ESTABLISH MUTUAL AGREEMENT ON WATER METER ADJUSTMENTS. REFERENCE SECTION 19 OF THE SPECIAL PROVISIONS.
- SURFACE IMPROVEMENTS ARE NOT SHOWN FOR LATERAL REPLACEMENTS DUE TO THE ACTUAL LOCATION NOT BEING KNOWN. SURFACE IMPROVEMENTS (CONCRETE, PERMANENT PATCH, ETC) TO INSTALL NEW SEWER LATERAL IS INCLUDED IN THE REMOVE AND REPLACE ACTIVE LATERAL BID ITEM.

IMPROVEMENT LEGEND



SIGN LEGEND



CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
 BOISE DRIVE SURFACE IMPROVEMENT PLAN
 WASHOE
 NEVADA
 SPARKS

REV	DATE	DESCRIPTION

BAR IS 1 INCH ON ORIGINAL DRAWING

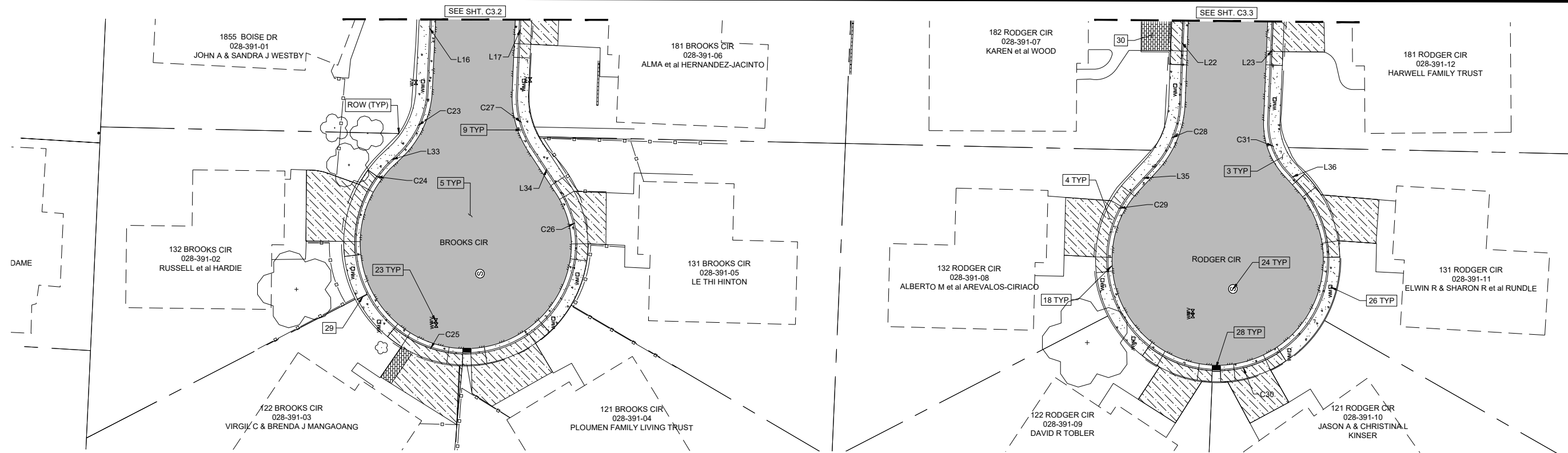
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

C3.3

DRAWN BY: MEP / SSW / IPN
 DESIGNED BY: TDA / RHH
 CHECKED BY: AJG
 JOB NO.: 10565.000

BID SET
 NOT FOR CONSTRUCTION
 SEPTEMBER 2024

L:\AP\0565.000 - Sewer Rehab - Quail St. Boise Dr. & Greenbrae Dr.\DWG\Sheets\0565000RESTO.dwg,C3.3, 09/26/2024 02:02 pm dhenricksen



LINE TABLE

LINE #	LENGTH	DIRECTION
L16	45.58	S87° 48' 06.83"E
L17	46.43	N88° 02' 51.05"W
L22	43.79	S88° 21' 22.89"E
L23	51.06	N88° 07' 38.68"W
L33	5.67	S43° 57' 18.51"E

LINE TABLE

LINE #	LENGTH	DIRECTION
L34	18.36	S56° 08' 31.68"W
L35	10.24	S47° 48' 41.22"E
L36	8.30	S47° 27' 33.84"W

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C23	26.02	34.00	43.85
C24	11.22	47.00	13.67
C25	141.81	40.50	200.63
C26	26.07	36.00	41.49
C27	21.25	34.00	35.81

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C28	26.18	37.00	40.54
C29	17.75	37.00	27.48
C30	167.70	40.50	237.25
C31	18.83	26.00	41.49

SHEET NOTES
1. CONTRACTOR TO VERIFY LOCATION AND MATERIAL OF SIDEWALK CROSSDRAIN AND REPLACE AT NO DIRECT PAYMENT. SHOWN LOCATION IS APPROXIMATE.

SHEET C3.5 QUANTITIES

NO.	DESCRIPTION	UNIT	QTY.	DETAIL	SHEET
1	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP	EA	-	S-106	D1.0
2	REMOVE AND REPLACE PCC ADA PEDESTRIAN RAMP LANDING AND TRUNCATED DOMES ONLY	EA	-	S-106	D1.0
3	REMOVE AND REPLACE PCC SIDEWALK	SF	1,396	S-103	D1.0
4	REMOVE AND REPLACE RESIDENTIAL DRIVEWAY APRON AND TRANSITION	SF	3,755	S-111	D1.1
5	RECONSTRUCT SECTION: PULVERIZE EXISTING ROADWAY, INSTALL 4-INCH ASPHALT ON 8-INCH AGGREGATE BASE	SF	12,137	C104	D1.1
6	PERFORM 2" GRIND AND OVERLAY	SF	-	C103	D1.1
7	PERMANENT BITUMINOUS FULL PAVEMENT PATCH (OTHER UTILITIES)	SF	-	-	-
8	PERMANENT BITUMINOUS PAVEMENT PATCH (SANITARY SEWER & STORM DRAIN)	LF	-	S-115	D1.2
9	REMOVE AND REPLACE PCC TYPE 1 CURB AND GUTTER	LF	612	S-109	D1.0
10	REMOVE AND REPLACE PCC POST CURB	LF	-	C100	D1.0
11	REMOVE AND REPLACE FENCE	LF	-	C110/C111	D1.3
12	INSTALL 4" BROKEN YELLOW PAVEMENT STRIPING	LF	-	-	-
13	INSTALL 4" DOUBLE SOLID YELLOW PAVEMENT STRIPING	LF	-	-	-
14	INSTALL 6" SOLID WHITE PAVEMENT STRIPING	LF	-	-	-
15	INSTALL 24" SOLID WHITE THERMOPLASTIC STOP BAR	LF	-	-	-
16	INSTALL 2' x 10' SOLID WHITE THERMOPLASTIC CROSSWALK KEYS	LF	-	S-411	D1.3
17	INSTALL RED CURB PAINT	LF	-	-	-
18	INSTALL THERMOPLASTIC YIELD TRIANGLES	EA	-	S-411	D1.3
19	INSTALL PREFORMED SOLID WHITE THERMOPLASTIC WORD LEGENDS - "STOP"	EA	-	-	-
20	FURNISH AND INSTALL NEW BASE, ANCHOR, AND POST	EA	-	S-401	D1.3
21	FURNISH AND INSTALL NEW STREET NAME SIGN	EA	-	-	-
22	FURNISH AND INSTALL NEW TRAFFIC SIGN ASSEMBLY	EA	-	-	-
23	PROTECT AND ADJUST EXISTING GAS AND WATER VALVE BOX TO FINISH GRADE	EA	4	C302	D1.7
24	PROTECT AND ADJUST MANHOLE STRUCTURE (NEW OR EXISTING) TO FINISH GRADE WITH NEW PCC COLLAR, AND PROVIDE NEW 24" CITY OF SPARKS LOGO COVER WITH, WHEN REQUIRED, A NEW 36" FRAME AND ADAPTOR	EA	2	S-209/S-210	D1.5
25	RECONSTRUCT SURVEY MONUMENT	EA	-	S-118	D1.3
26	PROTECT AND ADJUST EXISTING STANDARD OR SINGLE WATER METER BOX TO NEW FINISH GRADE (CONTINGENT ITEM)	EA	12	-	-
27	REMOVE AND REPLACE EXISTING TYPE 1 CATCH BASIN WITH TYPE 4R CATCH BASIN	EA	-	S-204	D1.4
28	PROTECT AND RESET EXISTING CATCH BASIN	EA	2	-	-
29	INSTALL SIDEWALK CROSS DRAIN	EA	1	S-105	-
30	REMOVE AND REPLACE PAVERS	SF	112	-	-

SURFACE IMPROVEMENT NOTES

- A. TEMPORARY PATCHES SHALL BE 3" HMA. COLD MIX NOT APPROVED. ALL AREAS MUST RECEIVE TEMPORARY PATCHES PRIOR TO OPENING TO TRAFFIC PER DETAIL S116/D1.2.
- B. WHEN PATCH IS LOCATED 24" OR LESS FROM CURB LINE, REPLACE TO THE CURB LINE, PER DETAIL S115/D1.2.
- C. SURFACE RESTORATION LIMITS ARE ESTIMATED AS SHOWN AND SHALL NOT BE CONSIDERED A MAXIMUM OR MINIMUM AREA. CONTRACTOR SHALL EVALUATE CONSTRUCTION METHODS, DESIGN DETAILS, EQUIPMENTS, SOILS, AND OTHER CONDITIONS TO DETERMINE QUANTITIES.
- D. PROTECT ALL EXISTING LANDSCAPE, STRUCTURES, TREES, UTILITIES, FENCING, BOXES, POLE, ETC. IN PLACE UNLESS NOTED OTHERWISE. IF DAMAGE IS CAUSED BY CONTRACTOR, THEN IT SHALL BE REPLACED AT NO DIRECT PAYMENT.
- E. UNLESS OTHERWISE NOTED, PROTECT AND ADJUST ALL EXISTING UTILITY MANHOLE FRAME AND COVER, VALVE BOXES, AND VAULT COVERS TO NEW FINISH GRADE WITHIN RESTORATION LIMITS.
- F. PAVEMENT PATCHING SHALL MATCH EXISTING THICKNESS, BUT SHALL BE NO MORE THAN 8" AND NO LESS THAN 4". REFER TO PATCHING DETAILS ON SHEET D1.2. GEOTECHNICAL LOGS, & BORE/TEST PITS SUMMARY TABLES ON GRADING SHEETS. THERE ARE VARIATIONS IN EXISTING AC THICKNESS.
- G. CONTRACTOR TO COORDINATE WITH TMWA ON CONDITION OF EXISTING BOXES FOR PROTECTION OR REPLACEMENT. EXISTING NON-TRAFFIC RATED BOXES WITHIN PROPOSED DRIVEWAY APRONS OR WINGS ARE TO BE REPLACED WITH NEW TRAFFIC RATED BOXES. CONTRACTOR SHALL BE REQUIRED TO ATTEND PRE-CONSTRUCTION WALK WITH THE TMWA INSPECTOR TO ESTABLISH MUTUAL AGREEMENT ON WATER METER ADJUSTMENTS. REFERENCE SECTION 19 OF THE SPECIAL PROVISIONS.
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IMPROVEMENT LEGEND

	RECONSTRUCT ROADWAY		
	2" GRIND AND OVERLAY		
	PERMANENT UTILITY PATCH FOR STORM & SEWER		
	PERMANENT PATCH FOR OTHER UTILITIES		
	PCC SIDEWALK		
	TYPE 1 CURB AND GUTTER		
	RESIDENTIAL DRIVEWAY APRON		
	LANDSCAPING		
	PAVERS		



0 20' 40'
22x34 SHEETS = HORIZONTAL: 1"=20'
11x17 SHEETS = HORIZONTAL: 1"=40'

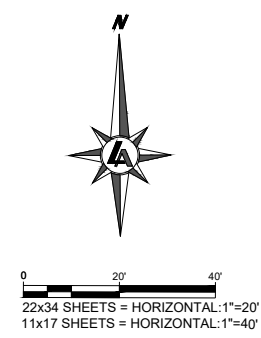
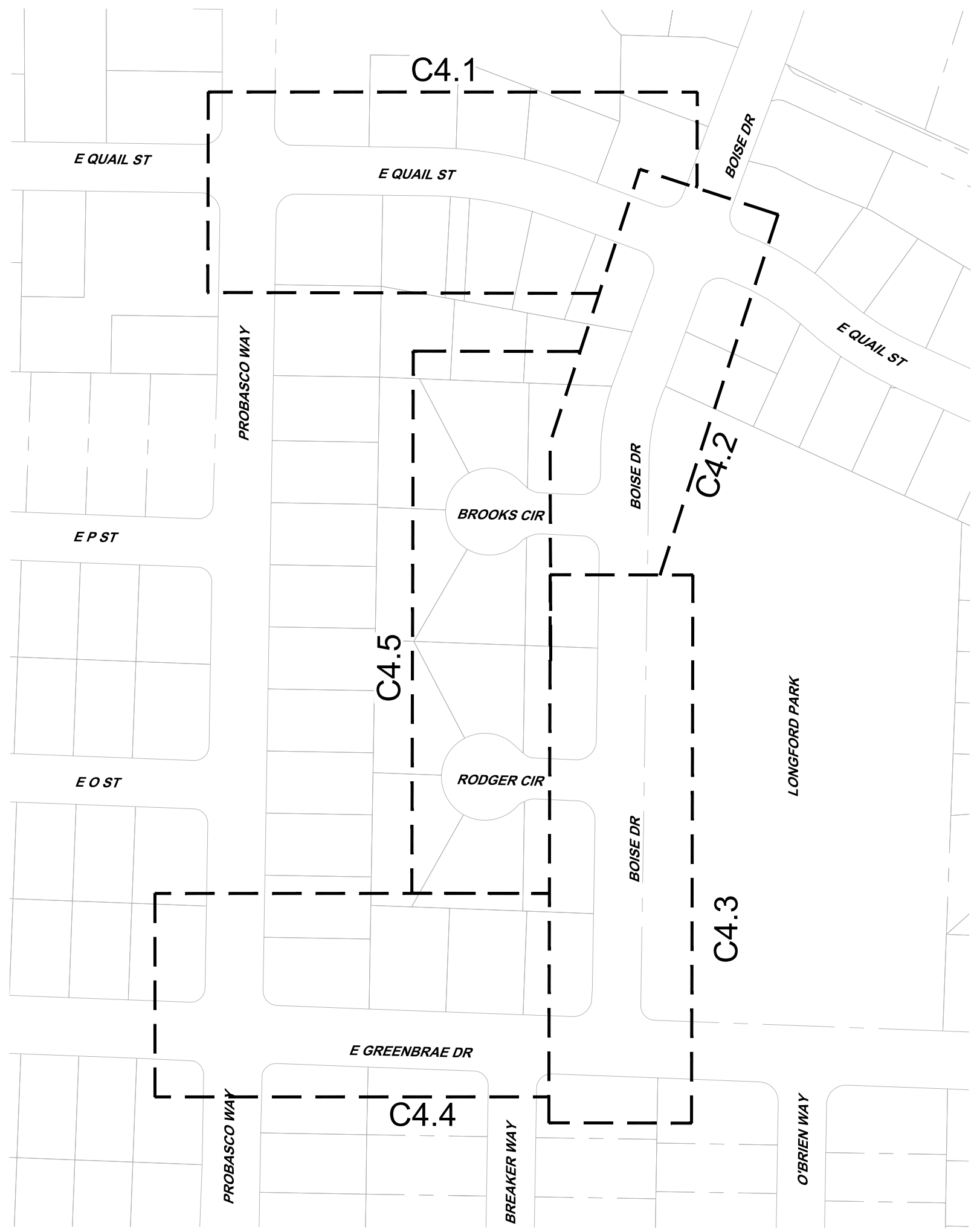
CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
BROOKS AND RODGER CIR SURFACE IMPROVEMENT PLAN
SPARKS
NEVADA
WASHINGTON

REV	DATE	DESCRIPTION

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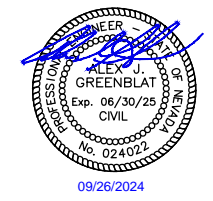
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L:\AP\0565.000 - Sewer Rehab - Quail St, Boise Dr & Greenbrae Dr\DWG\Sheets\0565000INDEX.dwg,C4.0, 09/26/2024 01:46 pm ohenricksen



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CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 GRADING SHEET INDEX
 SPARKS WASHOE NEVADA

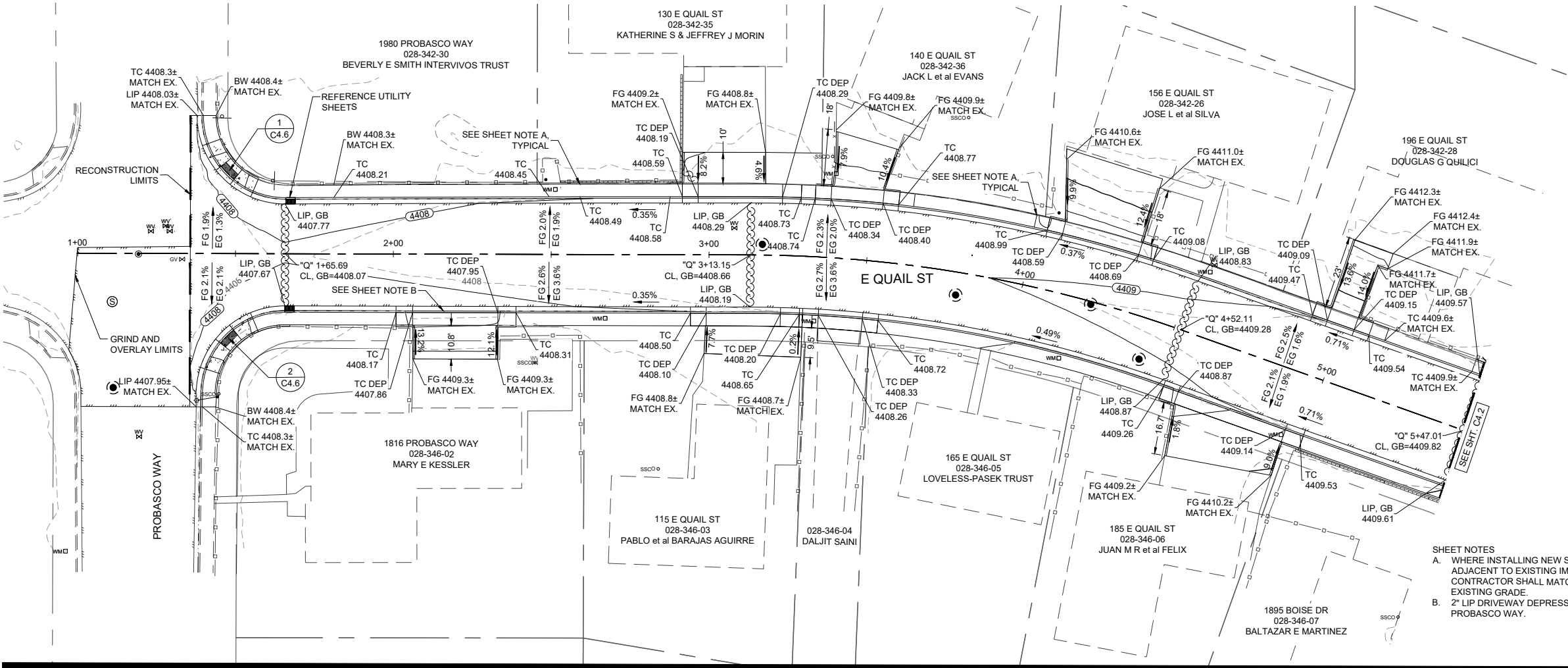
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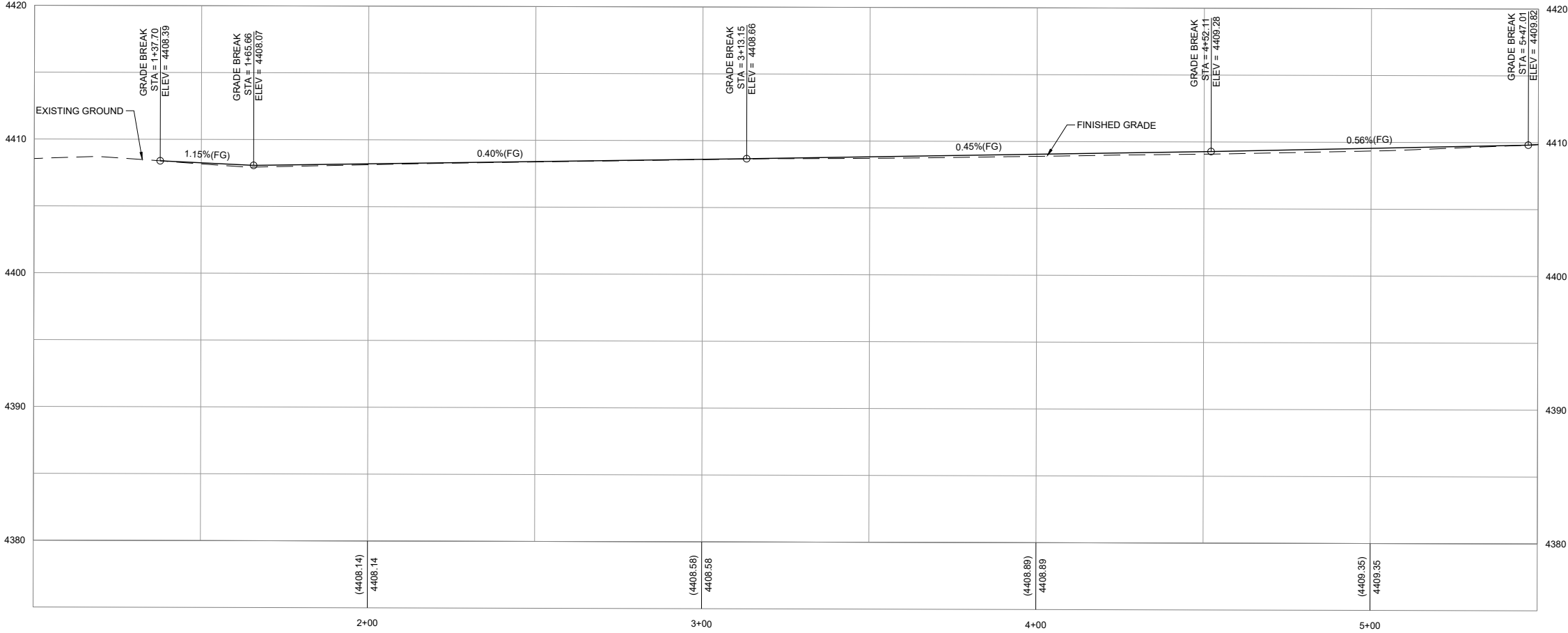
BID SET
 NOT FOR CONSTRUCTION
 SEPTEMBER 2024



- GRADING NOTES:**
- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
 - 2) REFER TO THE SURFACE IMPROVEMENT PLANS FOR ITEMS TO PROTECT IN PLACE WHILE PERFORMING GRADING OPERATIONS.
 - 3) CONTRACTOR TO PROVIDE CONSTRUCTION STAKING.
 - 4) PROPOSED ROADWAY CROWN VARIES SLIGHTLY FROM EXISTING GRADE. ON OCCASION, ADDITIONAL PULVERIZATION IN EXCESS OF THE 12" RECONSTRUCTION SECTION MAY BE REQUIRED. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING MATERIALS NECESSARY TO ACHIEVE THE ELEVATIONS AND GRADES NOTED ON THE IMPROVEMENT PLANS. ROADWAY MODIFICATION DEPTHS TO BE PROVIDED IN FUTURE SUBMITTALS.
 - 5) POTENTIAL SHALLOW UTILITIES AND SERVICES MAY BE ENCOUNTERED WITHIN THE ROADWAY SECTION. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATION AND DEPTH AND NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH ROADWAY PULVERIZATION ACTIVITIES.
 - 6) ADJUST EXISTING OR PROPOSED MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
 - 7) THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.
 - 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
 - 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.



Q - STA:1+00 TO STA:5+50



DRIVEWAY TABLE				
STATION, OFFSET	STREET ADDRESS	DEPRESSION WIDTH	WING LENGTH, SLOPE (WEST)	WING LENGTH, SLOPE (EAST)
2+19.66 18.50' RT	1816 PROBASCO WAY	27'	5.2' 7.8%	5.7' 7.7%
3+09.86 18.46' LT	130 E QUAIL ST	26.5'	5' 1.6%	6' 4.0%
3+10.91 18.50' RT	115 E QUAIL ST	23.5'	5' 8.1%	6' 7.6%
3+43.00 18.52' RT	A.P.N. 028-346-04	14'	5' 8.0%	5' 8.0%
3+45.41 18.67' LT	140 E QUAIL ST	16.5'	5' 8.1%	5' 7.4%
4+20.53 18.48' LT	156 E QUAIL ST	25'	5' 8.0%	5' 7.8%
4+75.96 18.75' RT	185 E QUAIL ST	36'	5' 7.8%	6' 7.8%
4+99.36 18.42' LT	196 E QUAIL ST	9'	5' 7.7%	5' 7.7%



0 20' 40'
 22x34 SHEETS = HORIZONTAL: 1"=20'
 11x17 SHEETS = HORIZONTAL: 1"=40'

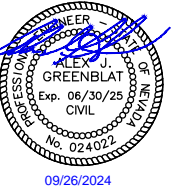
CITY OF SPARKS
**BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 QUAIL STREET GRADING PLAN**
 NEVADA
 WASHOE
 SPARKS

BY: _____

REV	DATE	DESCRIPTION

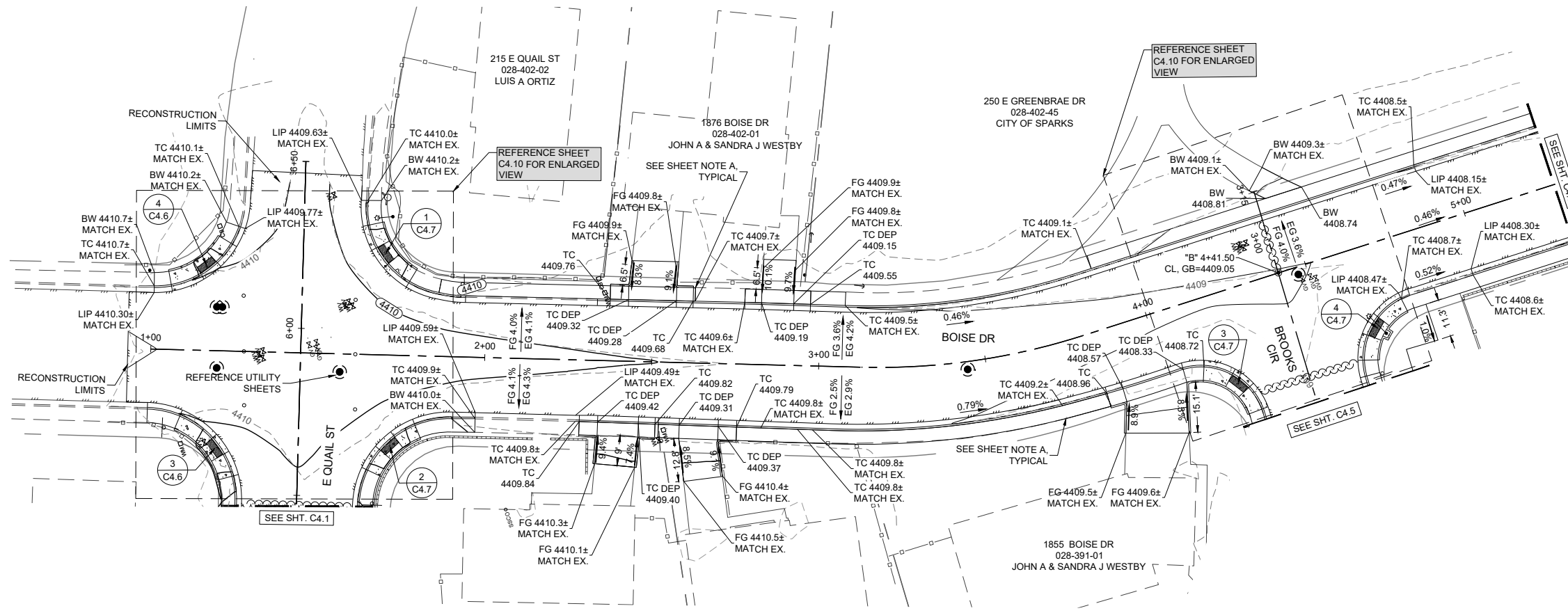
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 JOB NO.: 10565.000

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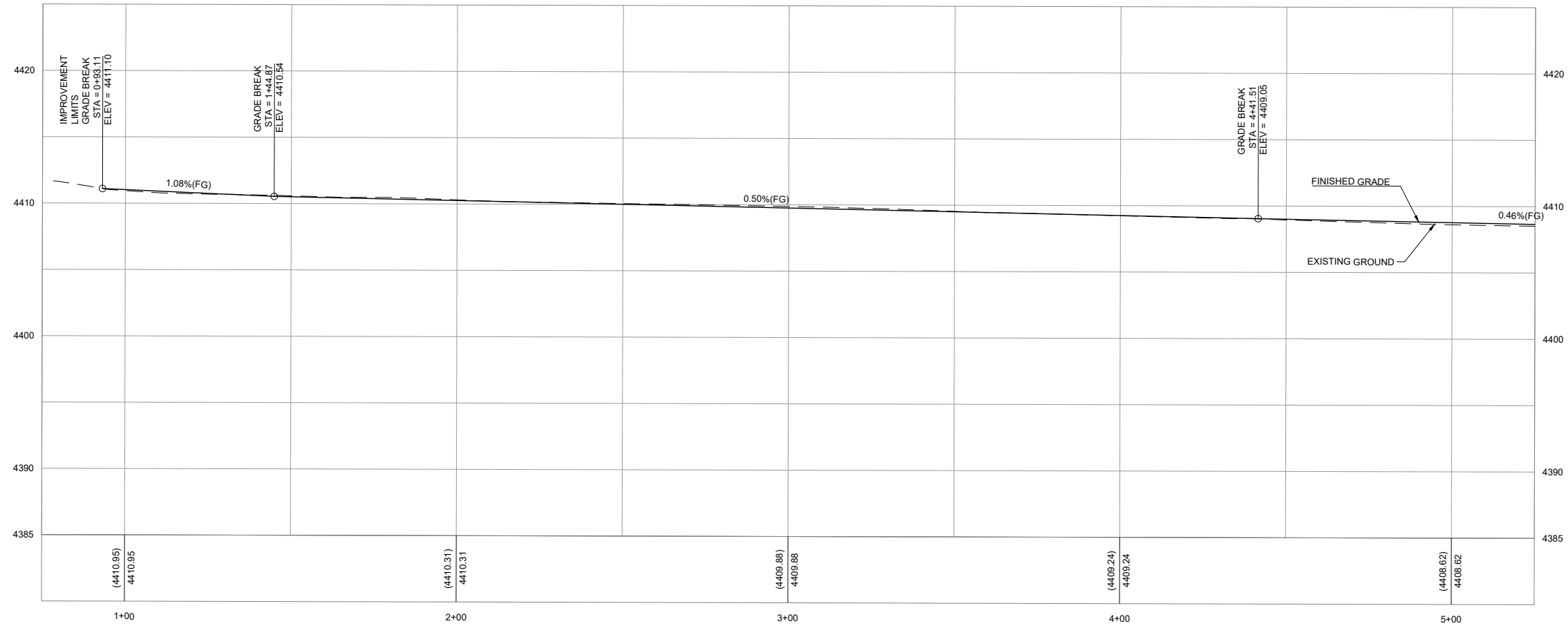


- GRADING NOTES:**
- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
 - 2) REFER TO THE SURFACE IMPROVEMENT PLANS FOR ITEMS TO PROTECT IN PLACE WHILE PERFORMING GRADING OPERATIONS.
 - 3) CONTRACTOR TO PROVIDE CONSTRUCTION STAKING.
 - 4) PROPOSED ROADWAY CROWN VARIES SLIGHTLY FROM EXISTING GRADE. ON OCCASION, ADDITIONAL PULVERIZATION IN EXCESS OF THE 12" RECONSTRUCTION SECTION MAY BE REQUIRED. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING MATERIALS NECESSARY TO ACHIEVE THE ELEVATIONS AND GRADES NOTED ON THE IMPROVEMENT PLANS. ROADWAY MODIFICATION DEPTHS TO BE PROVIDED IN FUTURE SUBMITTALS.
 - 5) POTENTIAL SHALLOW UTILITIES AND SERVICES MAY BE ENCOUNTERED WITHIN THE ROADWAY SECTION. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATION AND DEPTH AND NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH ROADWAY PULVERIZATION ACTIVITIES.
 - 6) ADJUST EXISTING OR PROPOSED MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
 - 7) THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.
 - 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
 - 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.

SHEET NOTES
A. WHERE INSTALLING NEW SIDEWALK ADJACENT TO EXISTING IMPROVEMENTS, CONTRACTOR SHALL MATCH THE EXISTING GRADE



B - STA:0+75 TO STA:5+25



DRIVEWAY TABLE				
STATION, OFFSET	STREET ADDRESS	DEPRESSION WIDTH	WING LENGTH, SLOPE (NORTH)	WING LENGTH, SLOPE (SOUTH)
2+40.36 18.54' RT	1895 BOISE DR	12.2'	5.5' 7.8%	5' 8.33%
2+49.77 18.47' LT	1876 BOISE DR	14.5'	5.5' 8.1%	5' 7.5%
2+64.55 18.50' RT	1875 BOISE DR	11.7'	6.2' 8.1%	5.5' 7.7%
2+87.24 18.49' LT	1876 BOISE DR	9.7'	5' 7.8%	5' 8.1%
3+94.06 18.92' LT	1855 BOISE DR	18.9'	5' 7.8%	6.3' 7.9%

CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
BOISE DRIVE GRADING PLAN
 NEVADA
 SPARKS
 WASHOE

REV	DATE	DESCRIPTION

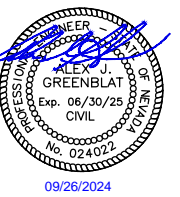
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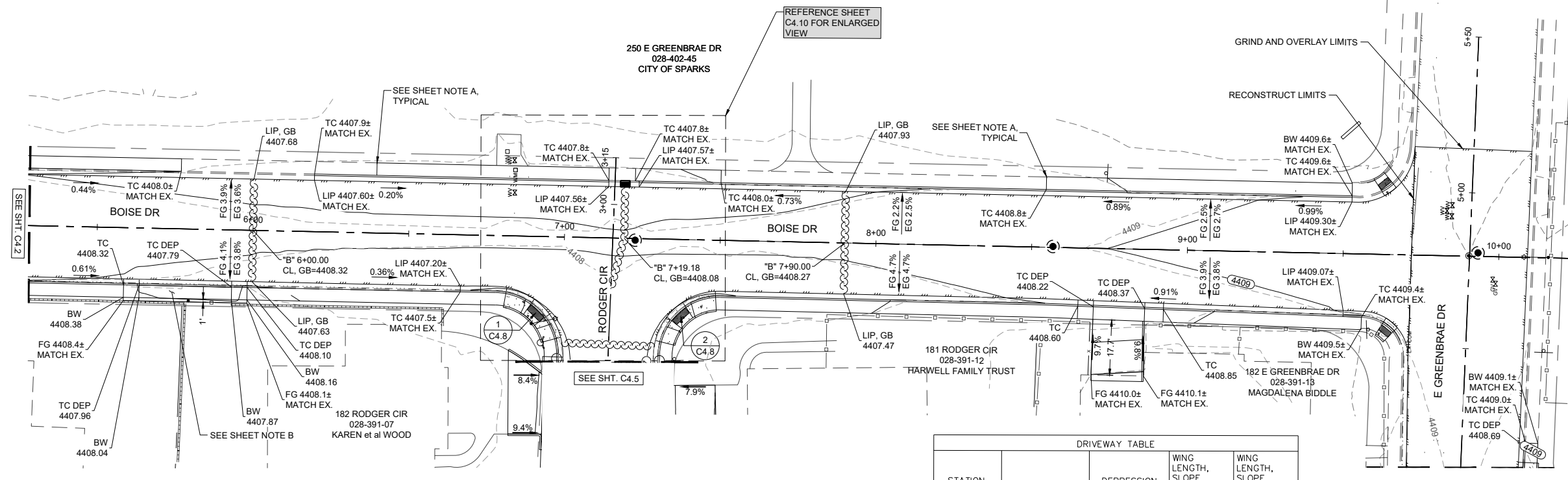
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DESIGNED BY: TDA / RHH
CHECKED BY: AJG
JOB NO.: 10565.000

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- GRADING NOTES:**
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 - 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
 - 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.

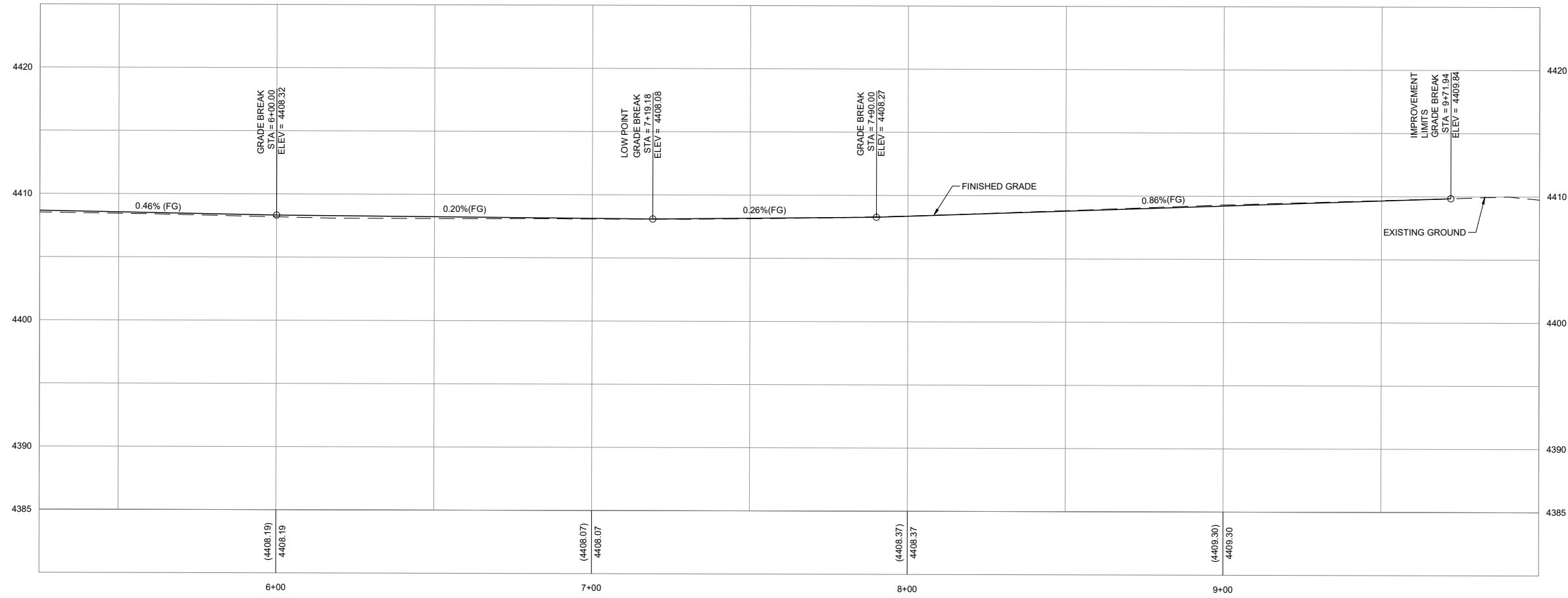


DRIVEWAY TABLE

STATION, OFFSET	STREET ADDRESS	DEPRESSION WIDTH	WING LENGTH, SLOPE (NORTH)	WING LENGTH, SLOPE (SOUTH)
5+78.66 18.37' RT	181 BROOKS CIR/182 ROGER CIR BACKYARD	39.7	5' 7.3%	5' 6.1%
8+78.45 18.93' RT	182 E GREENBRAE DR	16.5'	5' 7.6%	6.1' 8.0%

SHEET NOTES
A. WHERE INSTALLING NEW SIDEWALK ADJACENT TO EXISTING IMPROVEMENTS, CONTRACTOR SHALL MATCH THE EXISTING GRADE.
B. 2" DRIVEWAY LIP THIS DEPRESSION ONLY

B - STA:5+25 TO STA:10+00



0 20' 40'
22x34 SHEETS = HORIZONTAL: 1"=20'
11x17 SHEETS = HORIZONTAL: 1"=40'

**BOISE DRIVE SEWER INTERCEPTOR
REHABILITATION PROJECT
BOISE DRIVE GRADING PLAN**

BY: _____

DESCRIPTION: _____

REV: _____ DATE: _____

**BID SET
NOT FOR CONSTRUCTION
SEPTEMBER 2024**

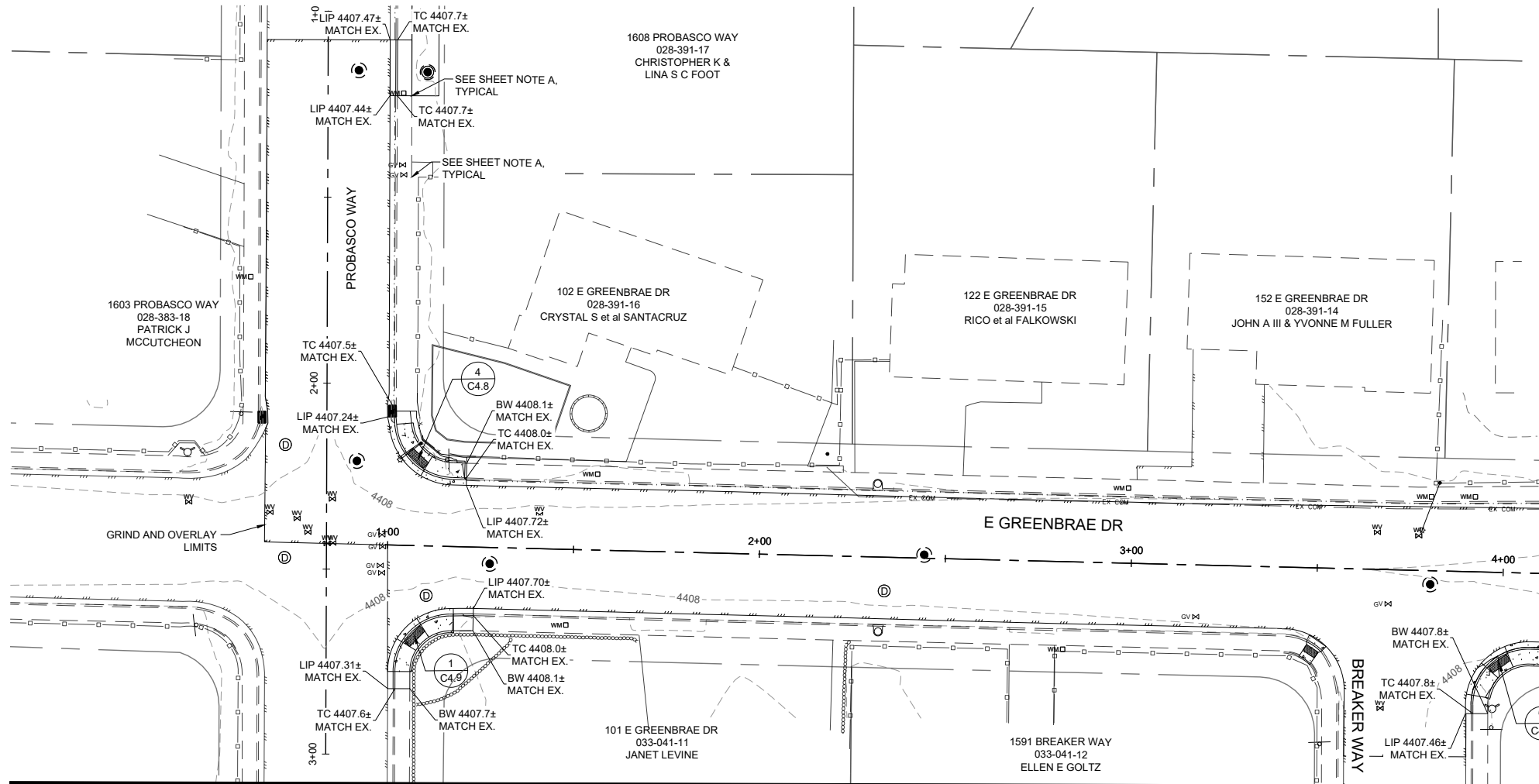
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C4.3

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DESIGNED BY: TDA / RHH
CHECKED BY: AJG
JOB NO.: 10565.000

L:\AP\0565.000 - Sewer Rehab - Quail St, Boise Dr & Greenbrae Dr\DWG\Sheets\0565000\GRADING.dwg,c4.4 GREENBRAE DR GRADING PLAN, 09/26/2024 01:47 pm ohenricksen



SHEET NOTES
 A. WHERE INSTALLING NEW SIDEWALK ADJACENT TO EXISTING IMPROVEMENTS, CONTRACTOR SHALL MATCH THE EXISTING GRADE

GRADING NOTES:

- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
- 2) REFER TO THE SURFACE IMPROVEMENT PLANS FOR ITEMS TO PROTECT IN PLACE WHILE PERFORMING GRADING OPERATIONS.
- 3) CONTRACTOR TO PROVIDE CONSTRUCTION STAKING.
- 4) PROPOSED ROADWAY CROWN VARIES SLIGHTLY FROM EXISTING GRADE. ON OCCASION, ADDITIONAL PULVERIZATION IN EXCESS OF THE 12" RECONSTRUCTION SECTION MAY BE REQUIRED. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING MATERIALS NECESSARY TO ACHIEVE THE ELEVATIONS AND GRADES NOTED ON THE IMPROVEMENT PLANS. ROADWAY MODIFICATION DEPTHS TO BE PROVIDED IN FUTURE SUBMITTALS.
- 5) POTENTIAL SHALLOW UTILITIES AND SERVICES MAY BE ENCOUNTERED WITHIN THE ROADWAY SECTION. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATION AND DEPTH AND NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH ROADWAY PULVERIZATION ACTIVITIES.
- 6) ADJUST EXISTING OR PROPOSED MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
- 7) THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.
- 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
- 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.



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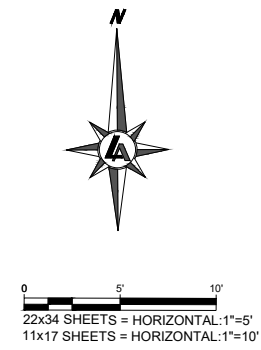
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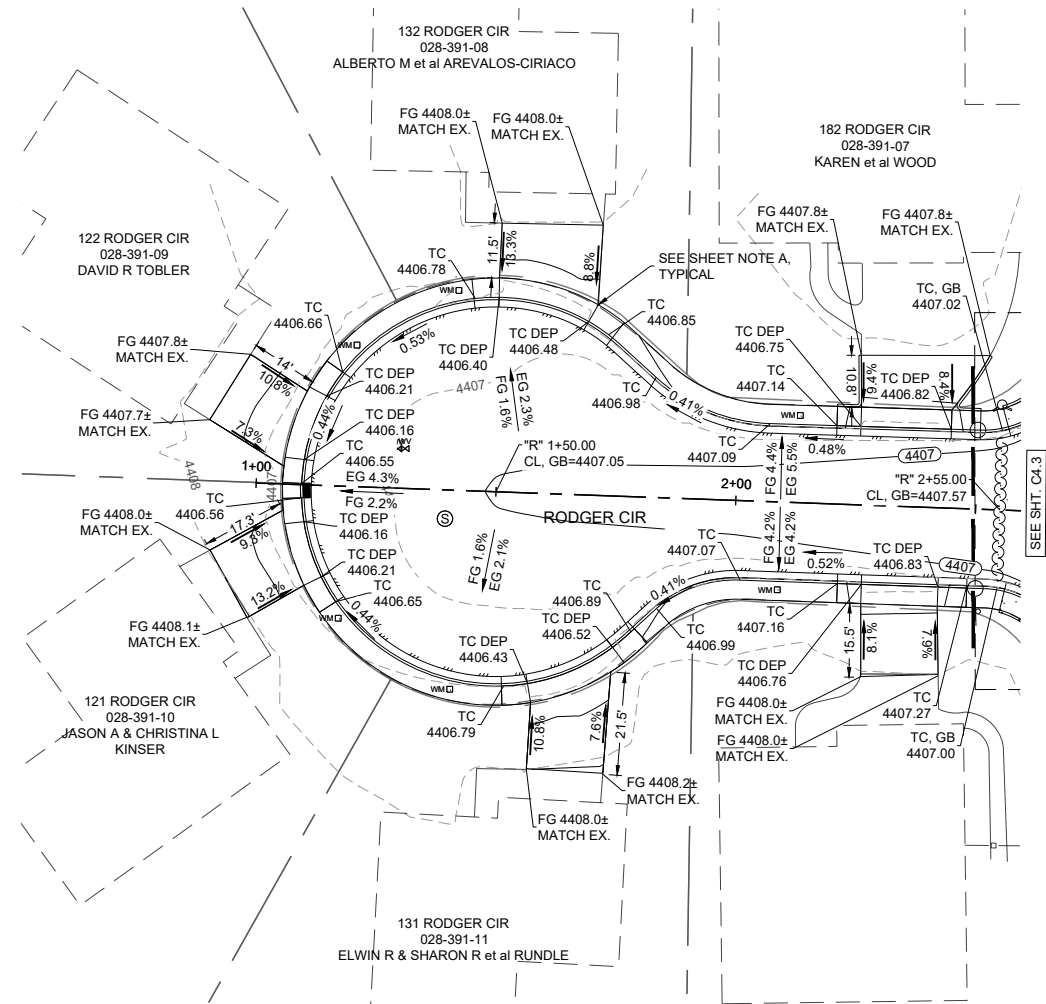
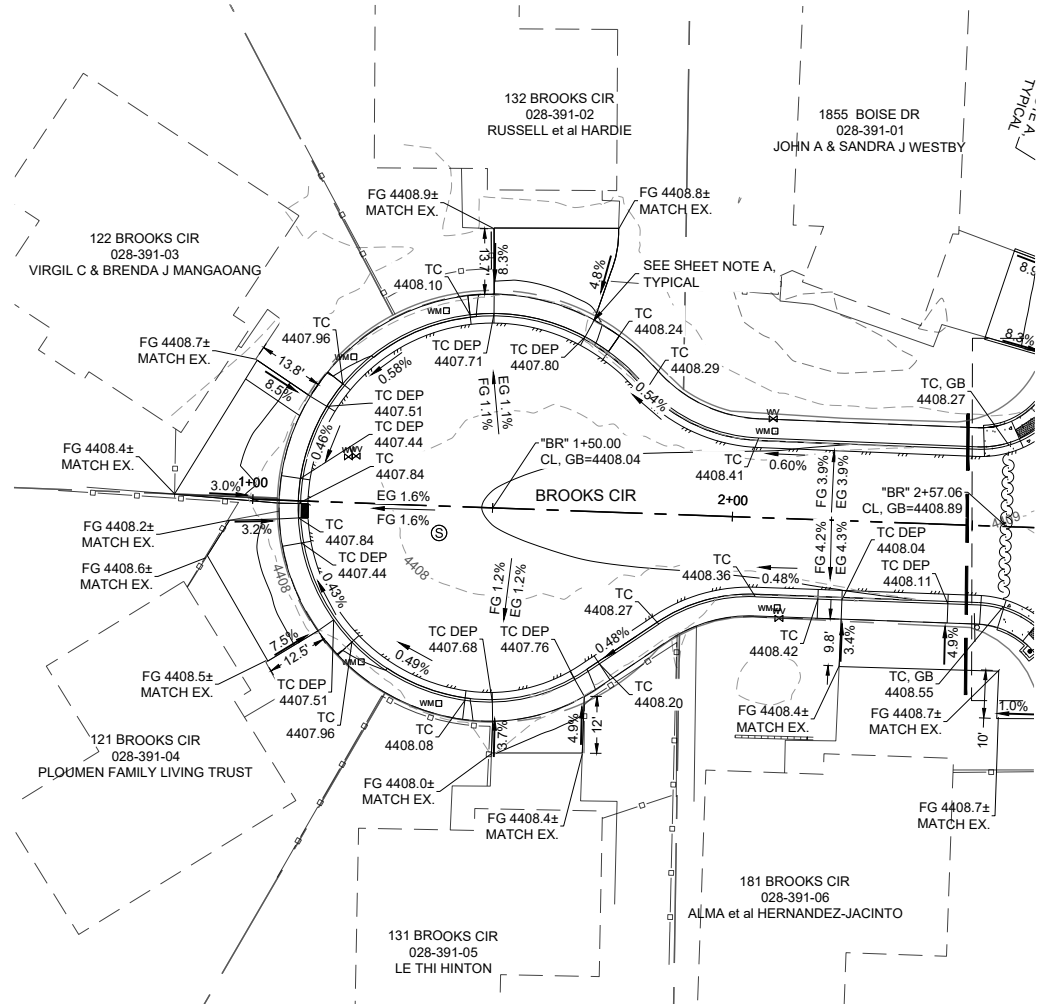


CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 GREENBRAE DRIVE GRADING PLAN
 SPARKS WASHOE NEVADA

REV	DATE	DESCRIPTION

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 CHECKED BY: AJG
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SHEET NOTES
 A. WHERE INSTALLING NEW SIDEWALK ADJACENT TO EXISTING IMPROVEMENTS, CONTRACTOR SHALL MATCH THE EXISTING GRADE

- GRADING NOTES:**
- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
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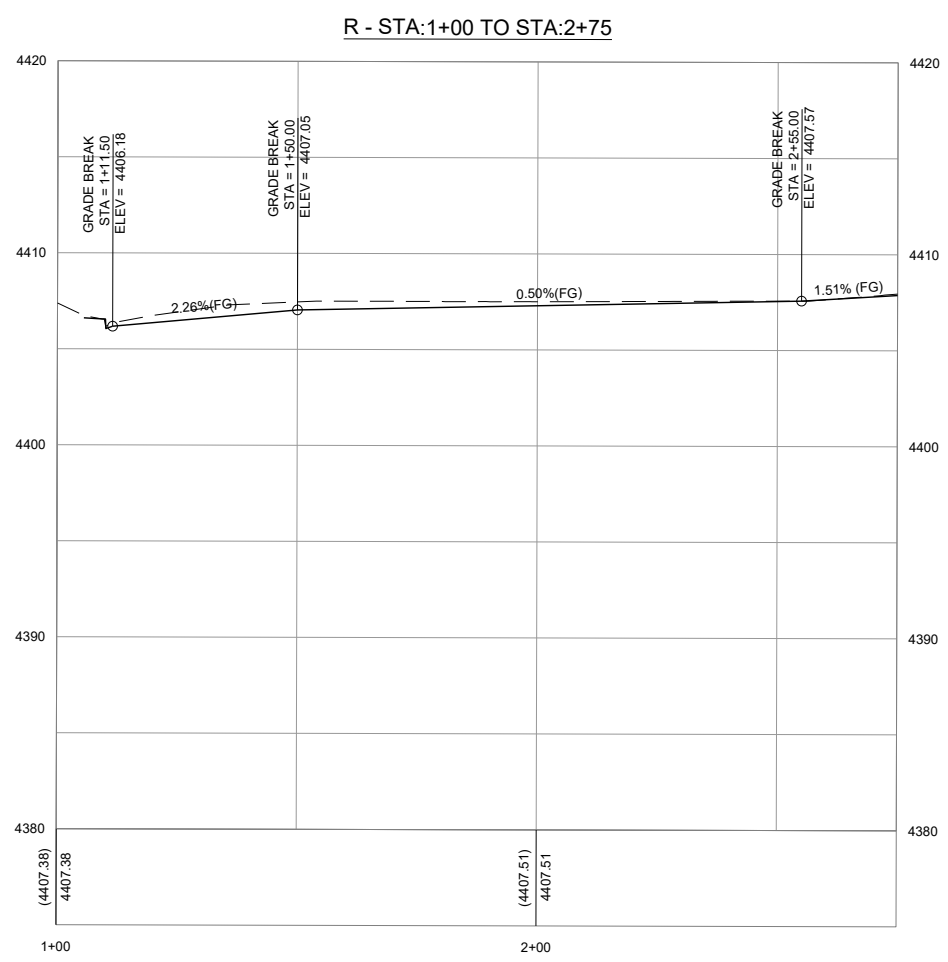
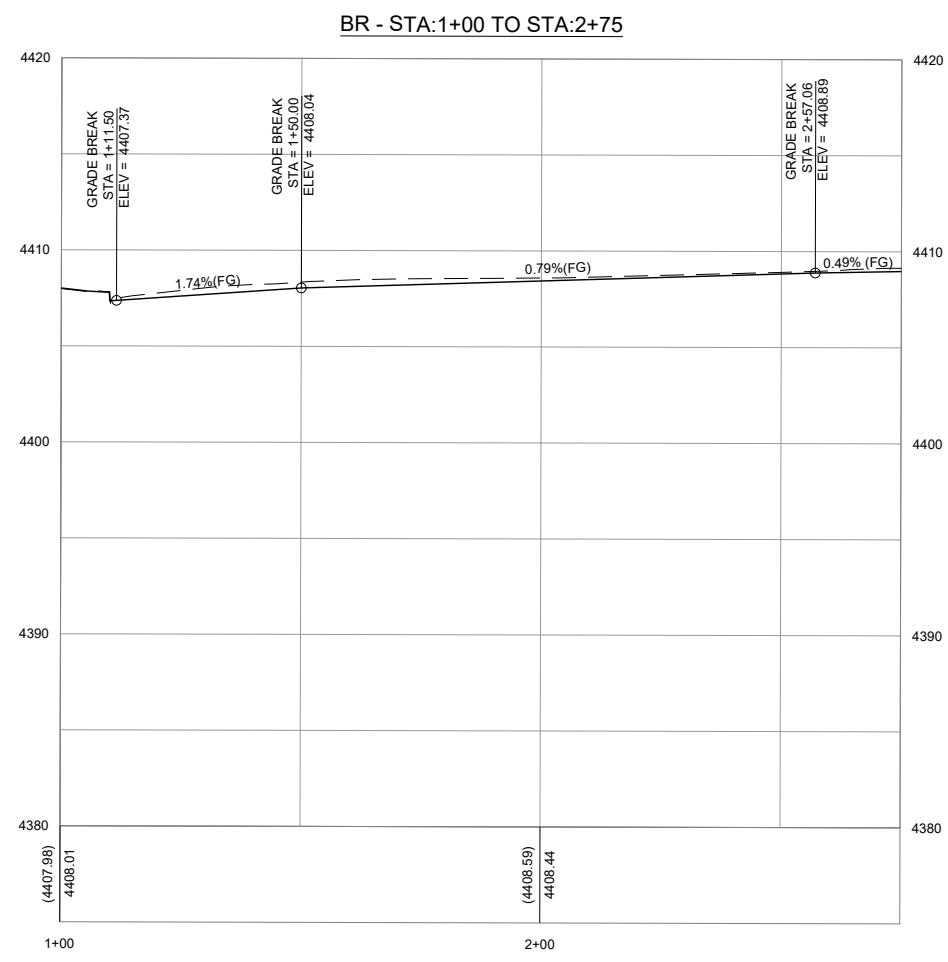
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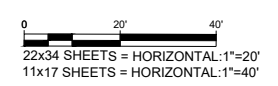


CITY OF SPARKS
**BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT**
BROOKS AND RODGER CIR GRADING PLAN
 SPARKS, NEVADA

L:\AP\0565.000 - Sewer Rehab - Quail St. & Greenblow Dr.\DWG\Sheets\05650000\GRADING.dwg, C4.5 BROOKS CIR AND RODGER CIR GRADING PLAN, 09/26/2024 01:47 pm ohenricksen



DRIVEWAY TABLE				
STATION, OFFSET	STREET ADDRESS	DEPRESSION WIDTH	WING LENGTH, SLOPE (WEST)	WING LENGTH, SLOPE (EAST)
1+11.56 12.85' LT	122 BROOKS CIR	16.1'	5.3' 7.6%	5.8' 7.9%
1+13.25 17.02' RT	121 BROOKS CIR	17.5'	5.2' 7.6%	6' 7.6%
1+58.65 39.57' LT	132 BROOKS CIR	19.8'	5' 7.9%	5.7' 7.6%
1+60.25 38.85' RT	131 BROOKS CIR	18'	5.7' 7.0%	6.1' 7.4%
2+34.47 16.52' RT	181 BROOKS CIR	22.1'	5' 7.6%	6.9' 6.7%
1+11.36 12.14' LT	122 RODGER CIR	14.1'	5' 8.0%	6' 7.6%
1+11.82 13.50' RT	121 RODGER CIR	12.1'	5' 8.0%	6' 7.5%
1+58.96 39.50' LT	132 RODGER CIR	19.5'	5.3' 7.6%	6' 7.5%
1+67.22 36.66' RT	131 RODGER CIR	19.5'	5.5' 7.3%	6' 7.5%
2+34.74 16.52' RT	181 RODGER CIR	16'	5' 8.0%	6' 7.4%
2+34.91 16.40' LT	182 RODGER CIR	18.8'	5' 7.9%	6' 7.5%



REV	DATE	DESCRIPTION

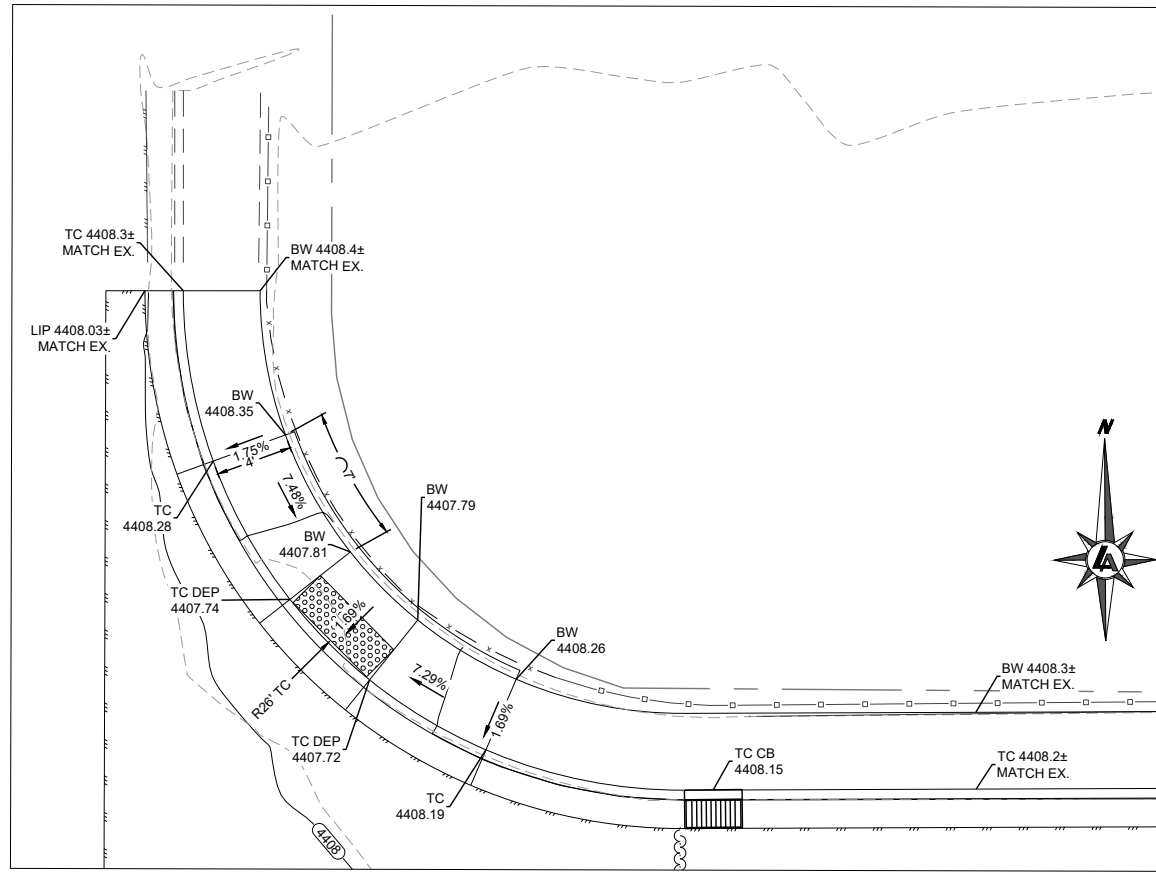
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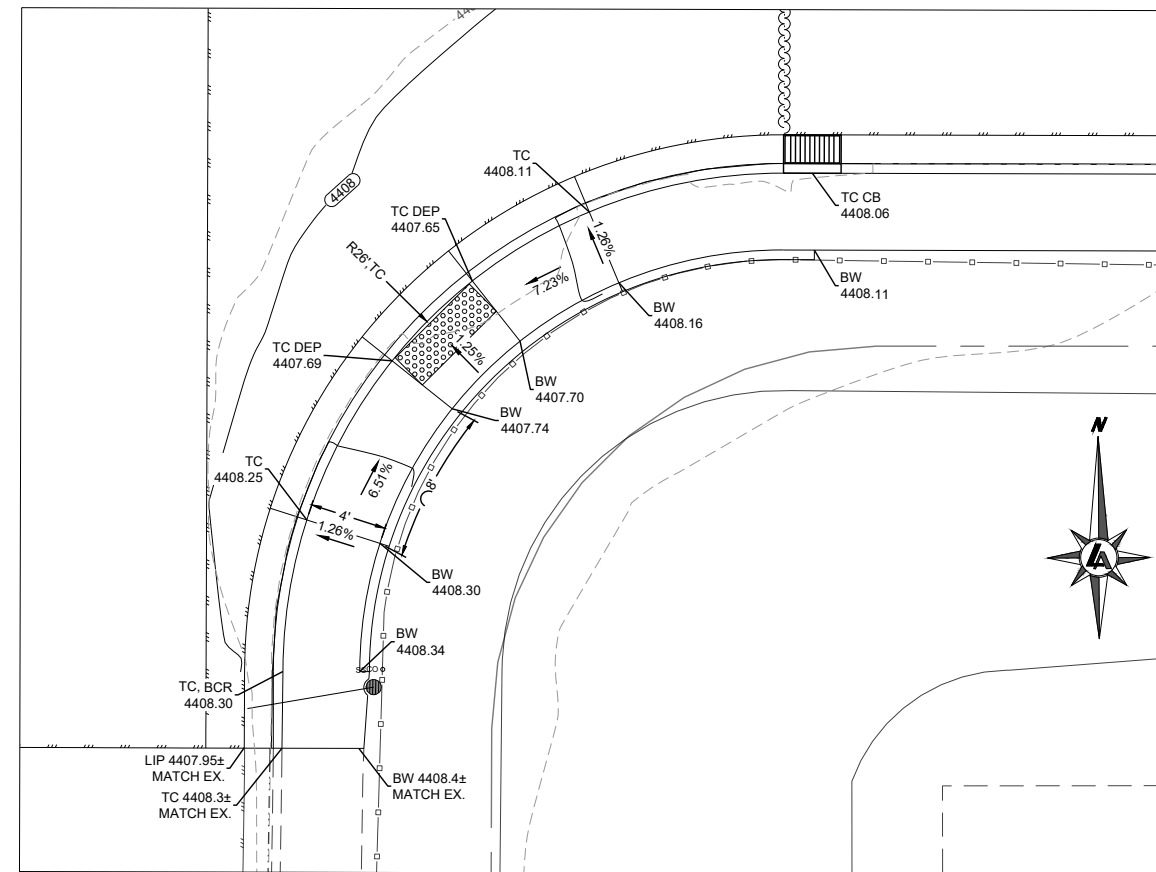
C4.5

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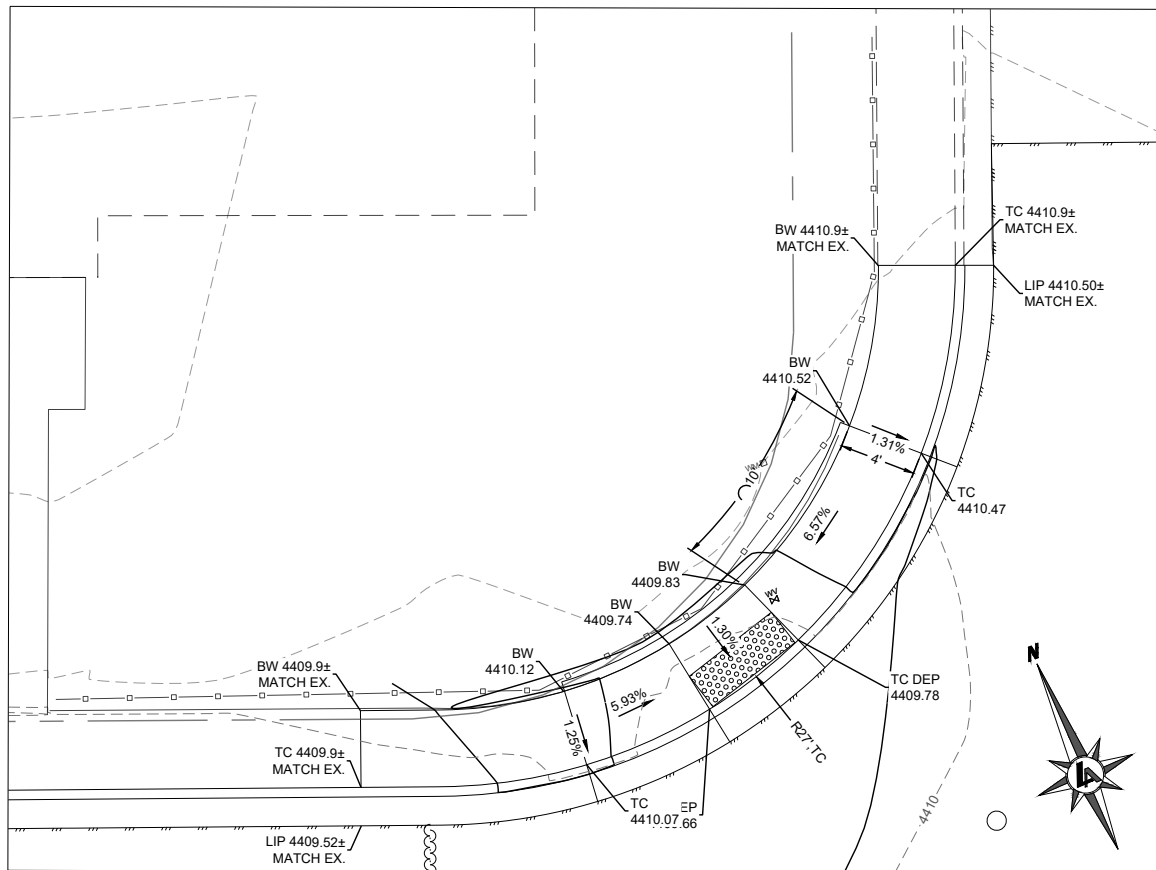


1
C4.6 PEDESTRIAN PATH DETAIL - PROBASCO WAY AND QUAIL STREET (NE)

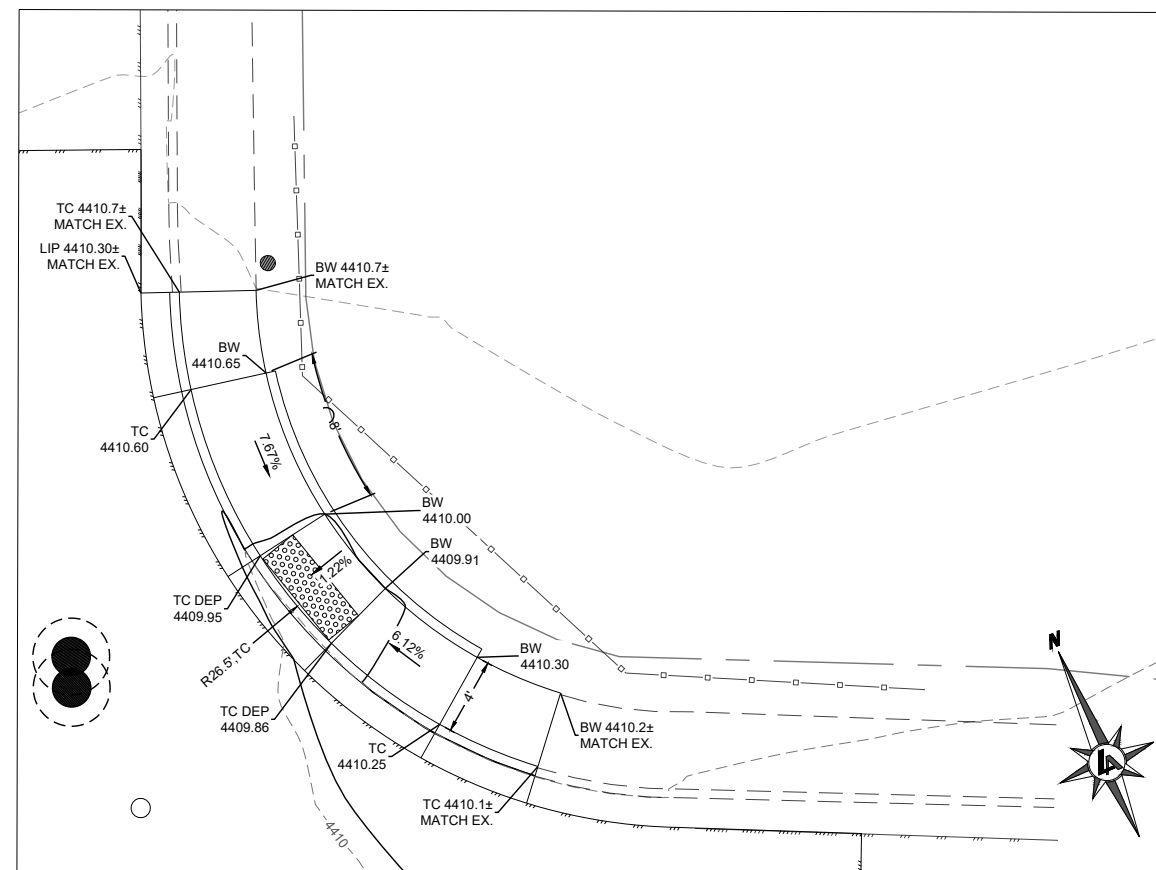


2
C4.6 PEDESTRIAN PATH DETAIL - PROBASCO WAY AND QUAIL STREET STREET (SE)

PEDESTRIAN RAMP NOTES:
 1. PEDESTRIAN RAMP WING SHALL BE 6' MINIMUM LENGTH (UNLESS NOTED ON THIS PLAN) AND NOT EXCEED 8.3%
 2. RAMP LANDING SHALL BE 5' WIDE



3
C4.6 PEDESTRIAN PATH DETAIL - QUAIL STREET AND BOISE DRIVE (NW)



4
C4.6 PEDESTRIAN PATH DETAIL - QUAIL STREET AND BOISE DRIVE (NE)

- GRADING NOTES:**
- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
 - 2) REFER TO THE SURFACE IMPROVEMENT PLANS FOR ITEMS TO PROTECT IN PLACE WHILE PERFORMING GRADING OPERATIONS.
 - 3) CONTRACTOR TO PROVIDE CONSTRUCTION STAKING.
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 - 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.



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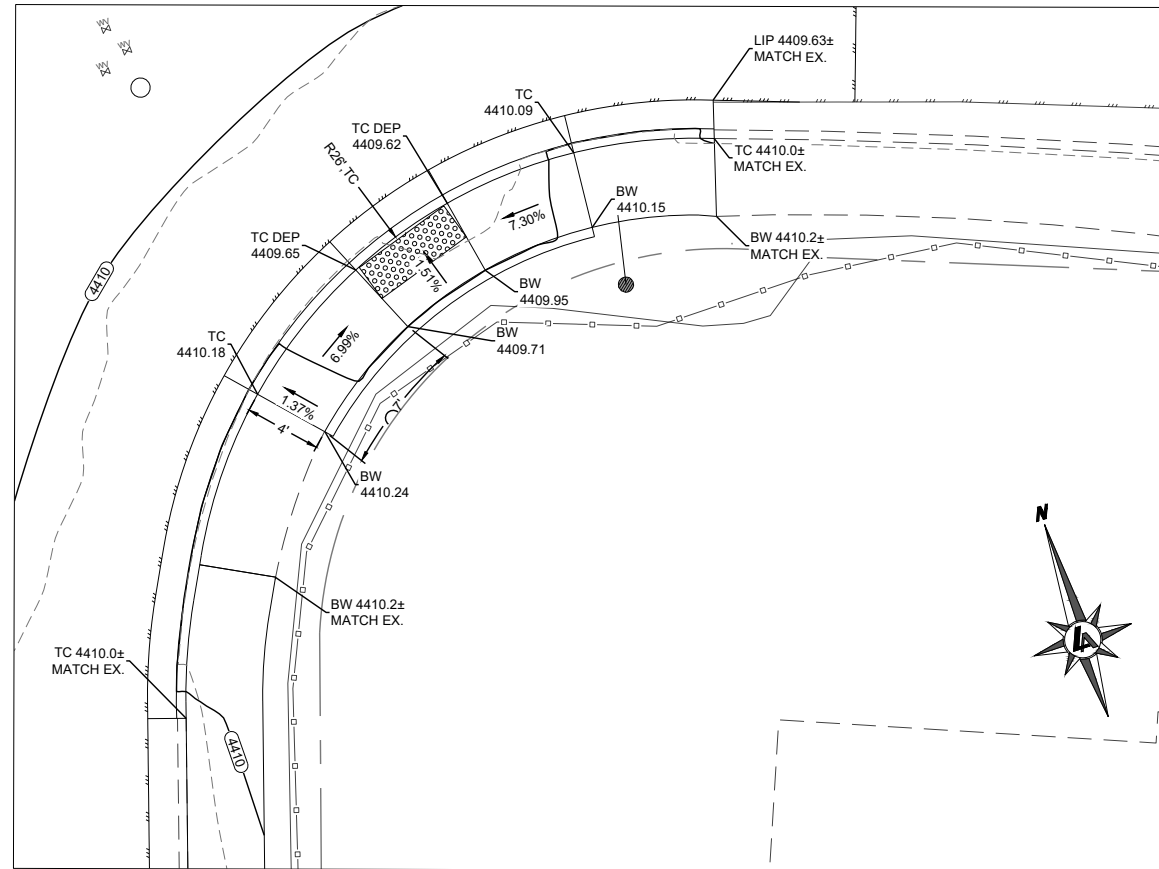


CITY OF SPARKS
 BOISE DRIVE SEWER INTERCEPTOR
 REHABILITATION PROJECT
 PEDESTRIAN PATH GRADING PLAN
 SPARKS WASHINGTON NEVADA

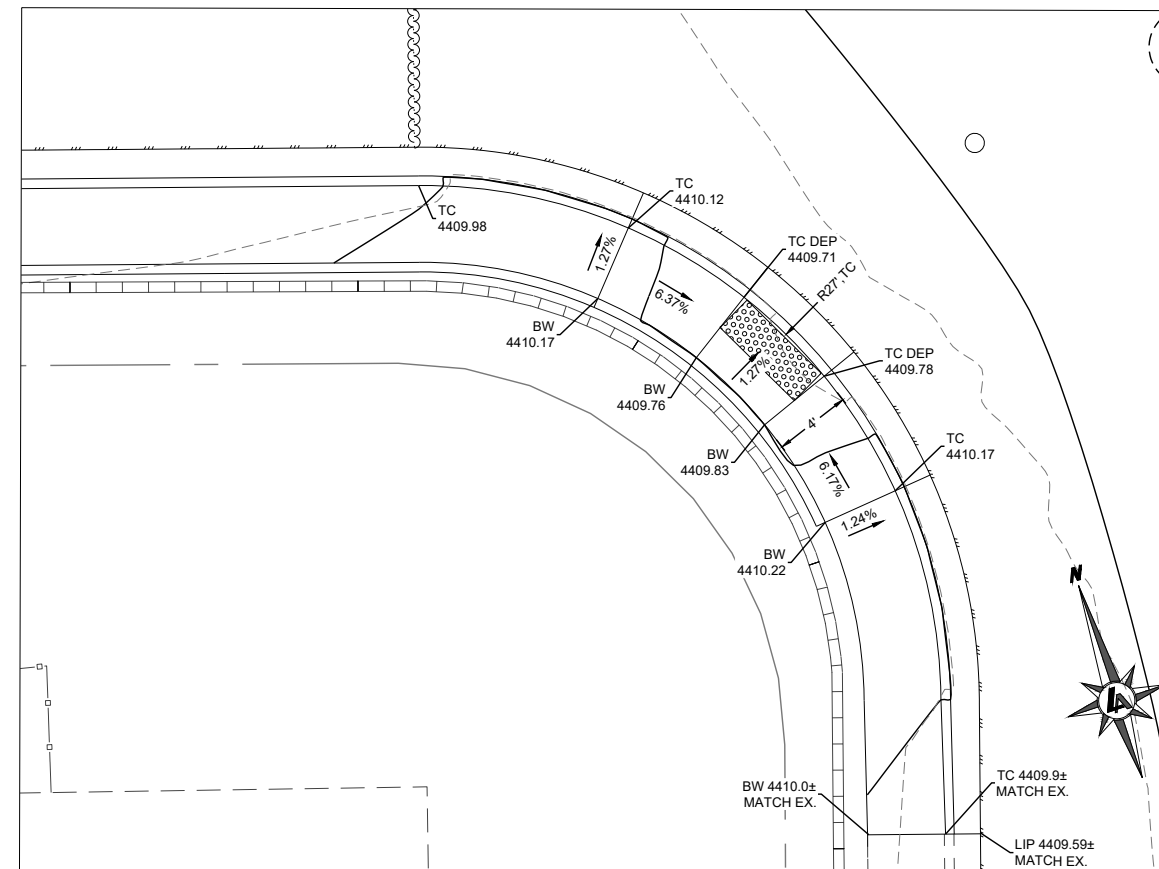
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 JOB NO.: 10565.000

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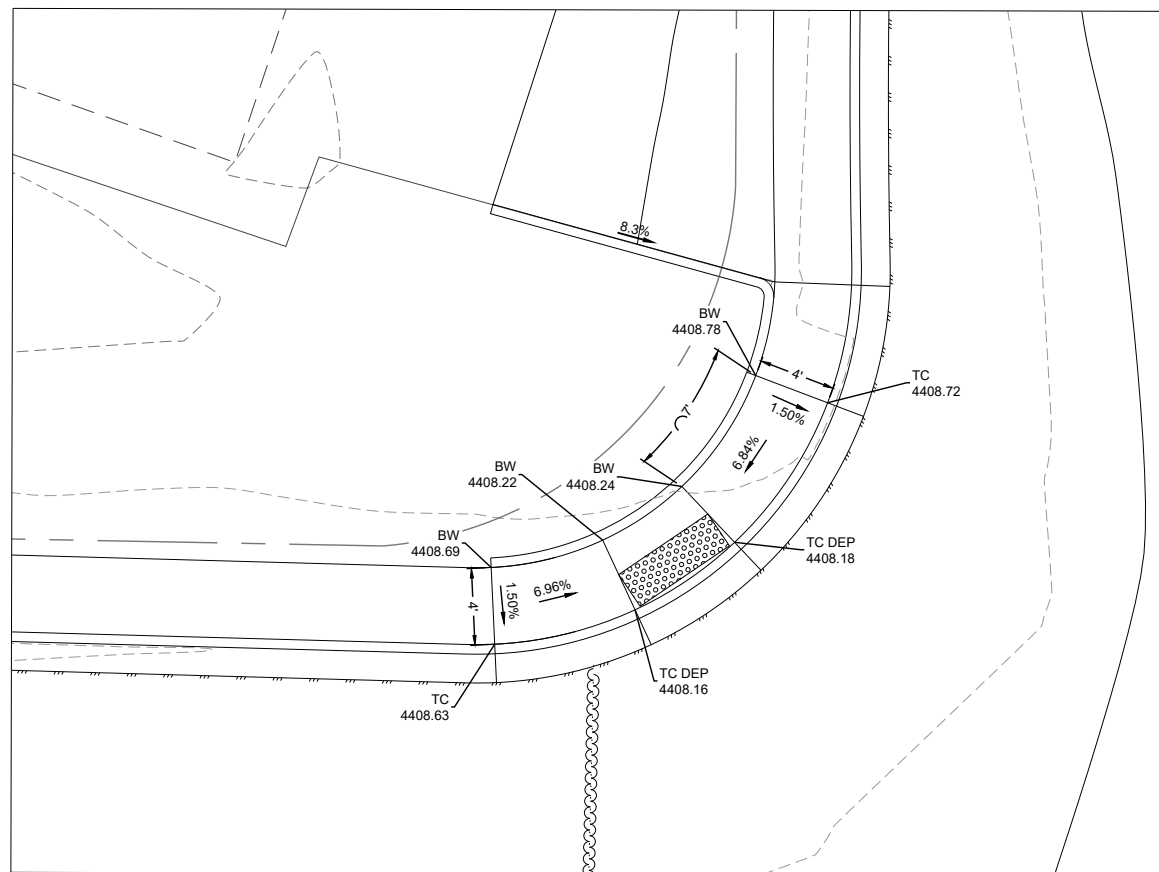


1
C4.7 PEDESTRIAN PATH DETAIL - BOISE DRIVE AND QUAIL STREET (SE)

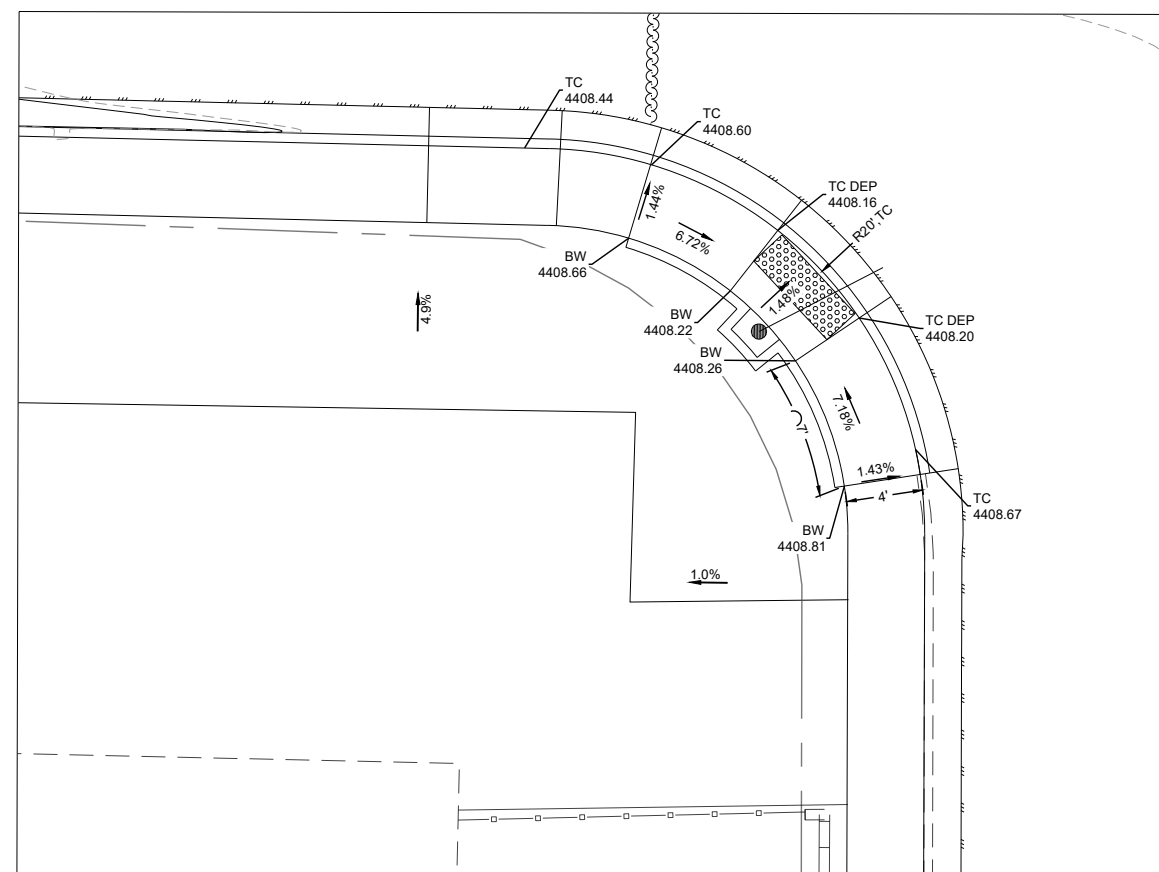


2
C4.7 PEDESTRIAN PATH DETAIL - BOISE DRIVE AND QUAIL STREET (SW)

PEDESTRIAN RAMP NOTES:
 1. PEDESTRIAN RAMP WING SHALL BE 6' MINIMUM LENGTH (UNLESS NOTED ON THIS PLAN) AND NOT EXCEED 8.3%
 2. RAMP LANDING SHALL BE 5' WIDE



3
C4.7 PEDESTRIAN PATH DETAIL - BOISE DRIVE AND BROOKS CIRCLE (NW)



4
C4.7 PEDESTRIAN PATH DETAIL - BOISE DR AND BROOKS CIRCLE (SW)

- GRADING NOTES:**
- 1) THE GRADING INTENT FOR THIS PROJECT IS TO MATCH EXISTING GRADES AT BACK OF WALK, OR WHERE INDICATED ON THE PLAN SHEETS.
 - 2) REFER TO THE SURFACE IMPROVEMENT PLANS FOR ITEMS TO PROTECT IN PLACE WHILE PERFORMING GRADING OPERATIONS.
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 - 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
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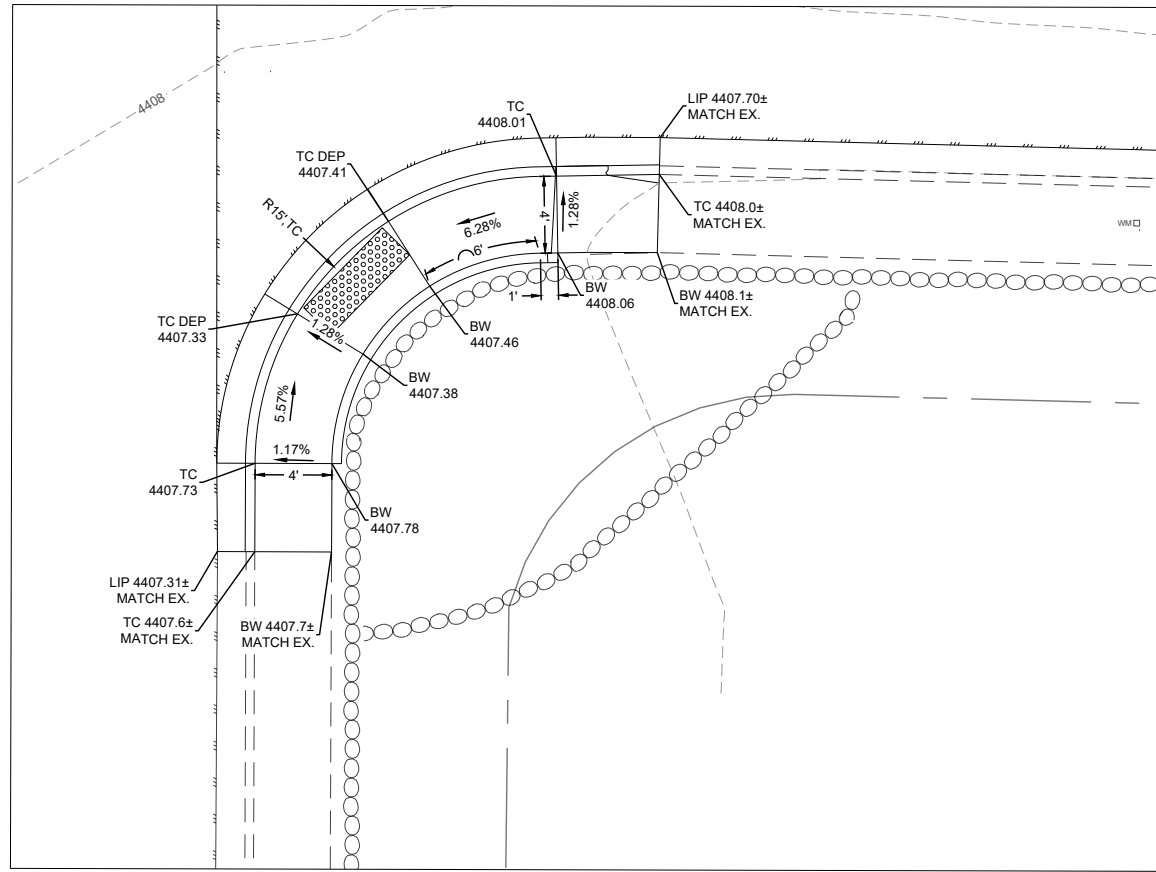


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
PEDESTRIAN PATH GRADING PLAN
 NEVADA
 SPARKS
 WASHOE

REV	DATE	DESCRIPTION

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 CHECKED BY: AJG
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1
C4.9 PEDESTRIAN PATH DETAIL - PROBASCO WAY AND GREENBRAE DRIVE (SE)

PEDESTRIAN RAMP NOTES:

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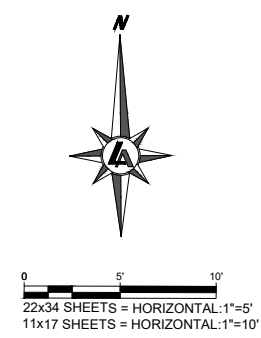
CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR
REHABILITATION PROJECT
PEDESTRIAN PATH GRADING PLAN
SPARKS WASHOE NEVADA

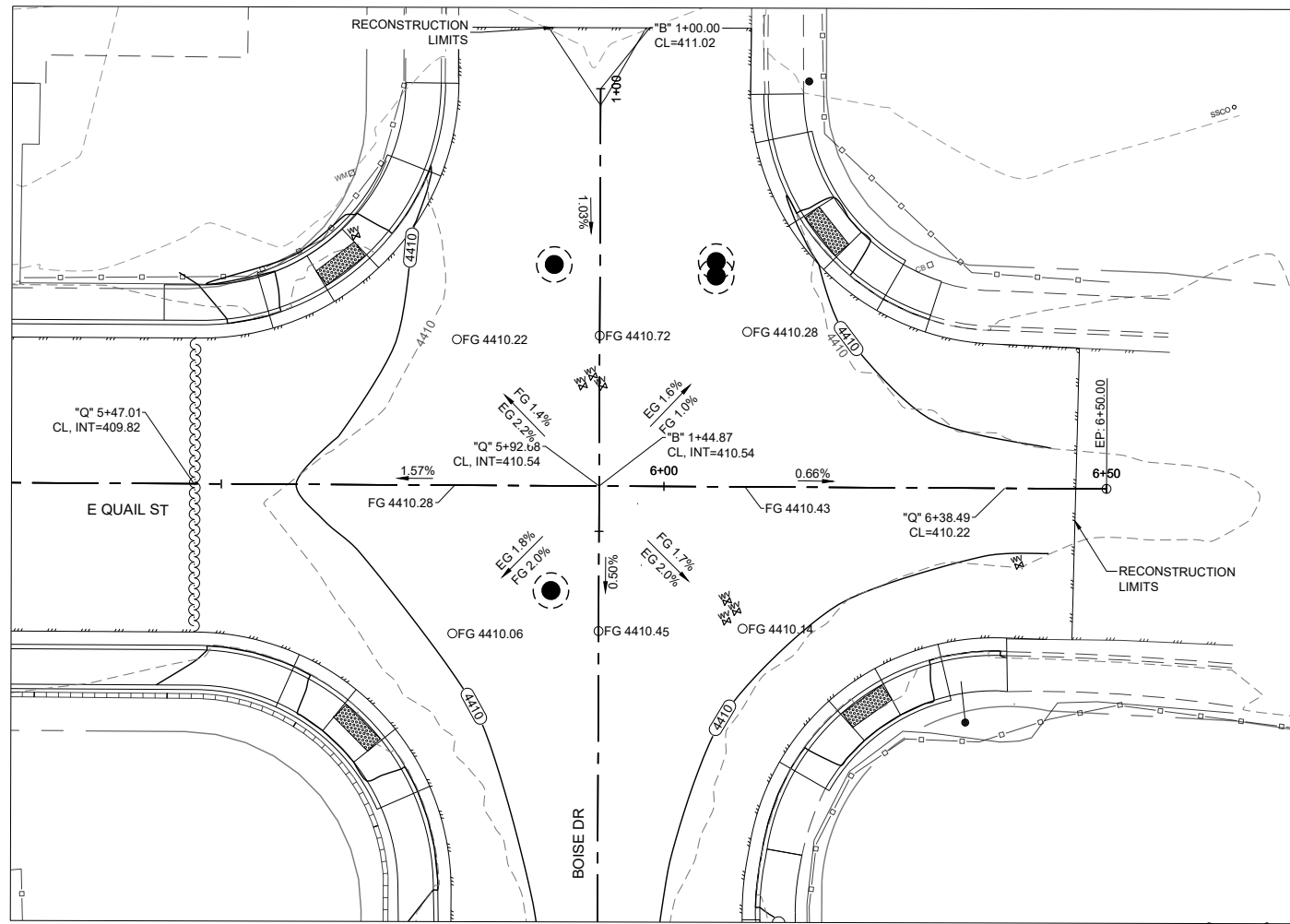
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DESIGNED BY: TDA / RHH
CHECKED BY: AJG
JOB NO.: 10565.000





INTERSECTION ENLARGED VIEW - E. QUAIL STREET AND BOISE DRIVE

22x34 SHEETS = HORIZONTAL: 1"=10'
11x17 SHEETS = HORIZONTAL: 1"=20'

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 - 6) ADJUST EXISTING OR PROPOSED MANHOLE RIM ELEVATIONS TO MATCH FINISH GRADE.
 - 7) THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING OF CONSTRUCTION.
 - 8) PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS DESIGNATED FOR REPLACEMENT.
 - 9) REFER TO STORM DRAIN SHEETS FOR STORM DRAIN IMPROVEMENTS.



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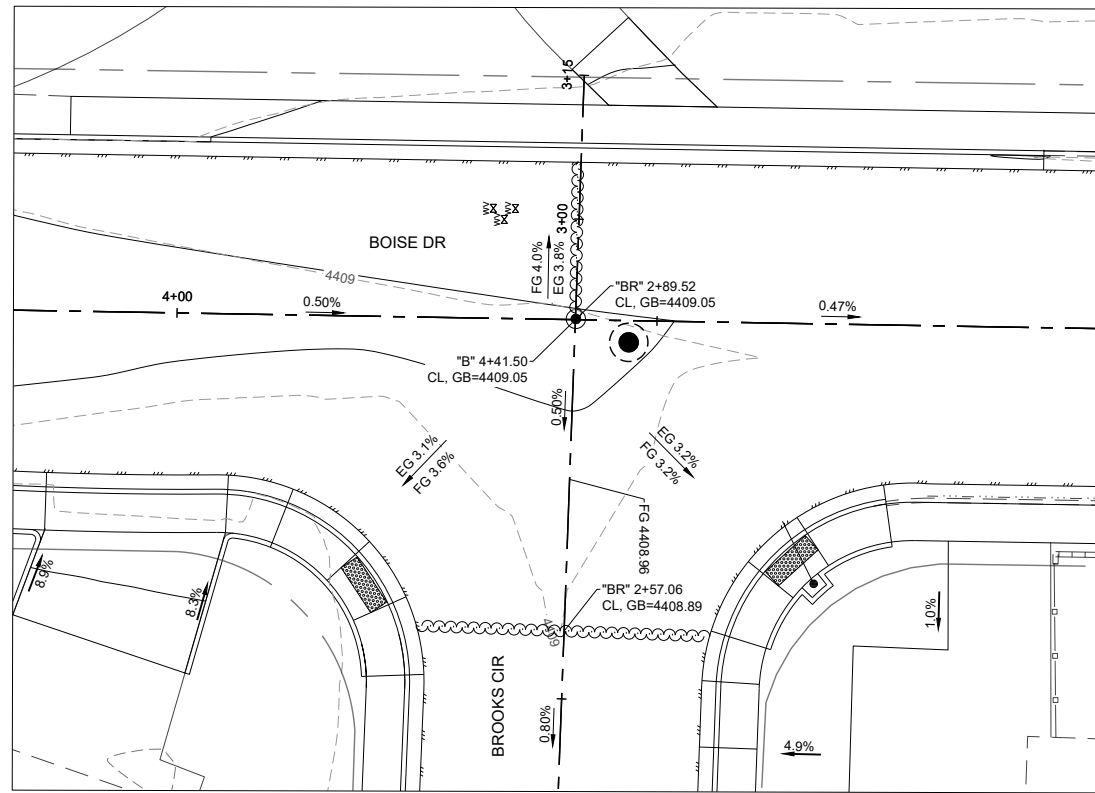


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
INTERSECTION ENLARGED VIEWS
NEVADA
SPARKS
WASHOE

REV	DATE	DESCRIPTION

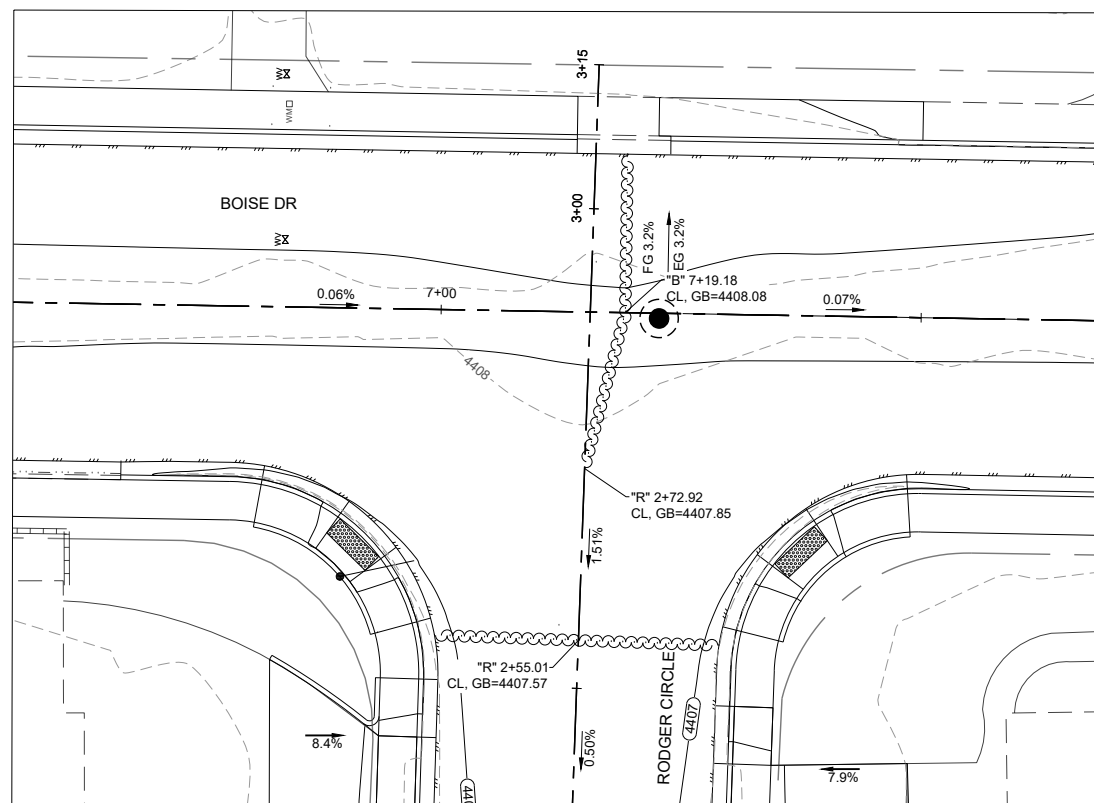
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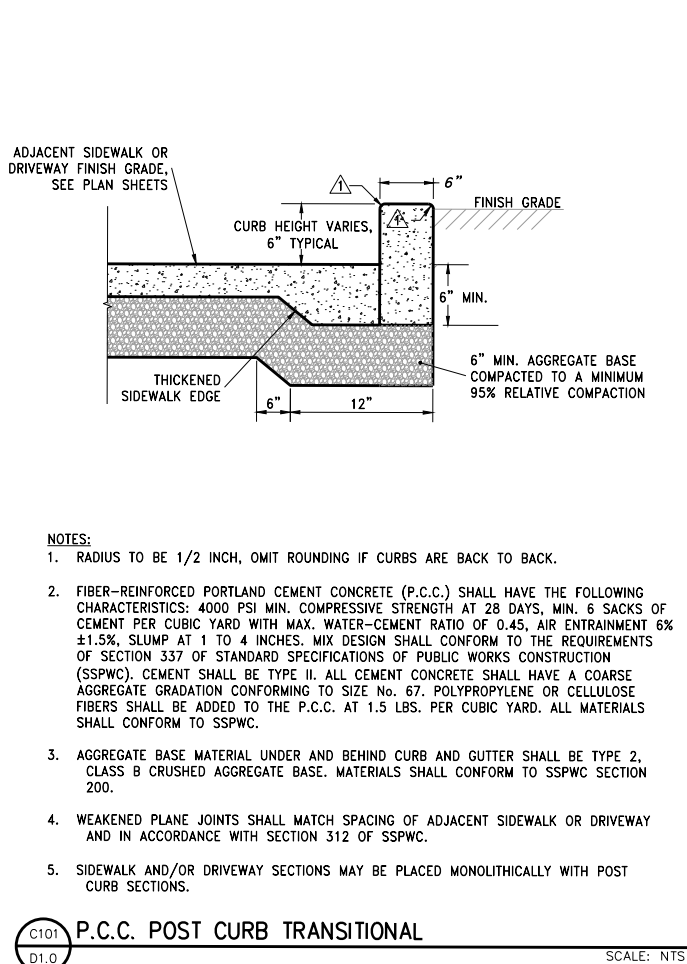
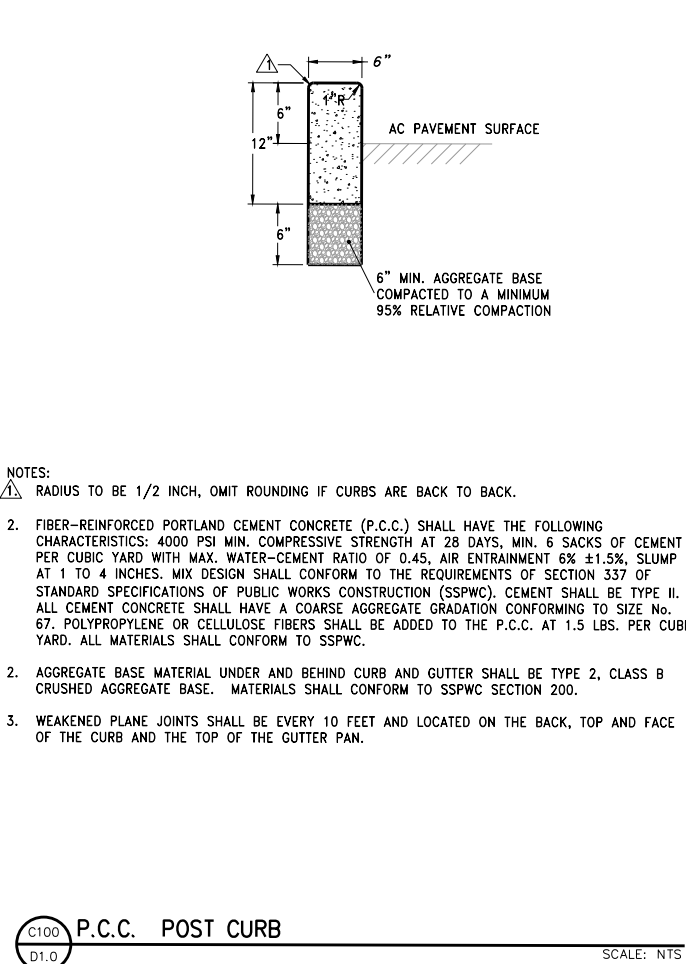
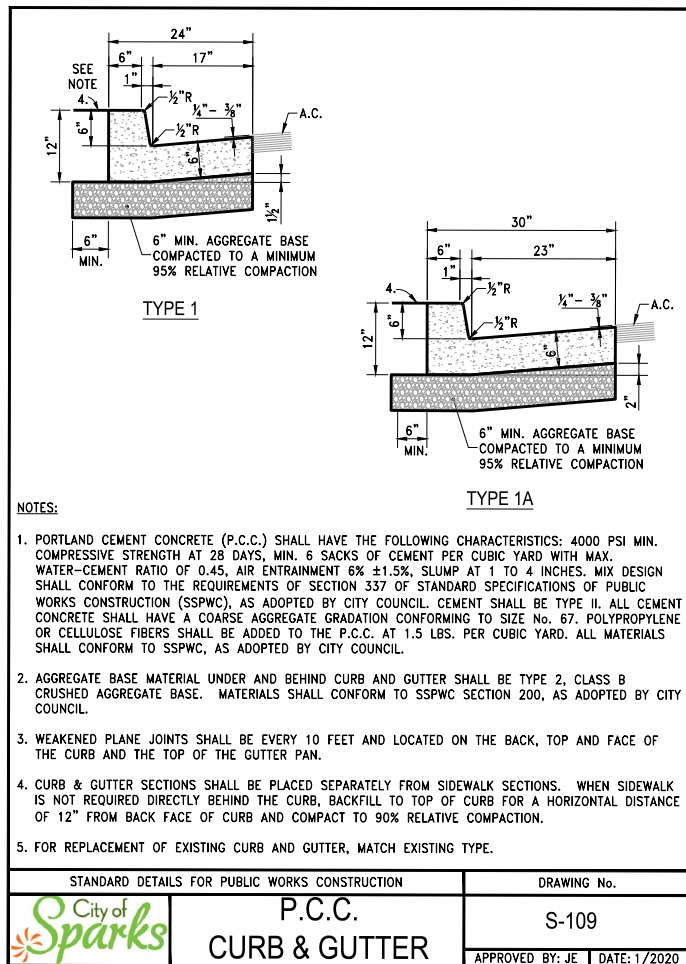
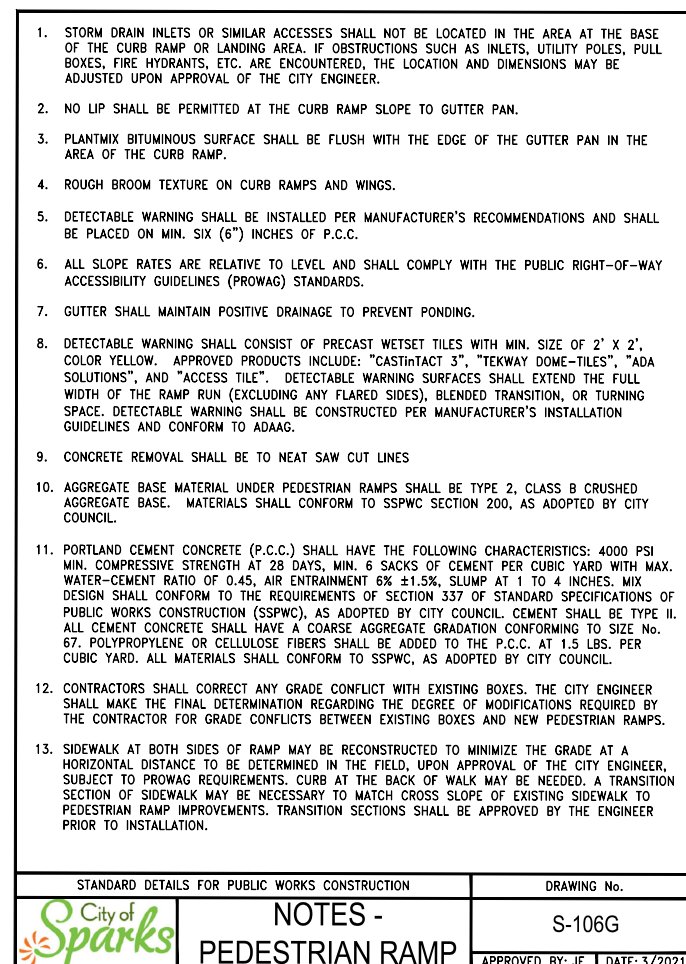
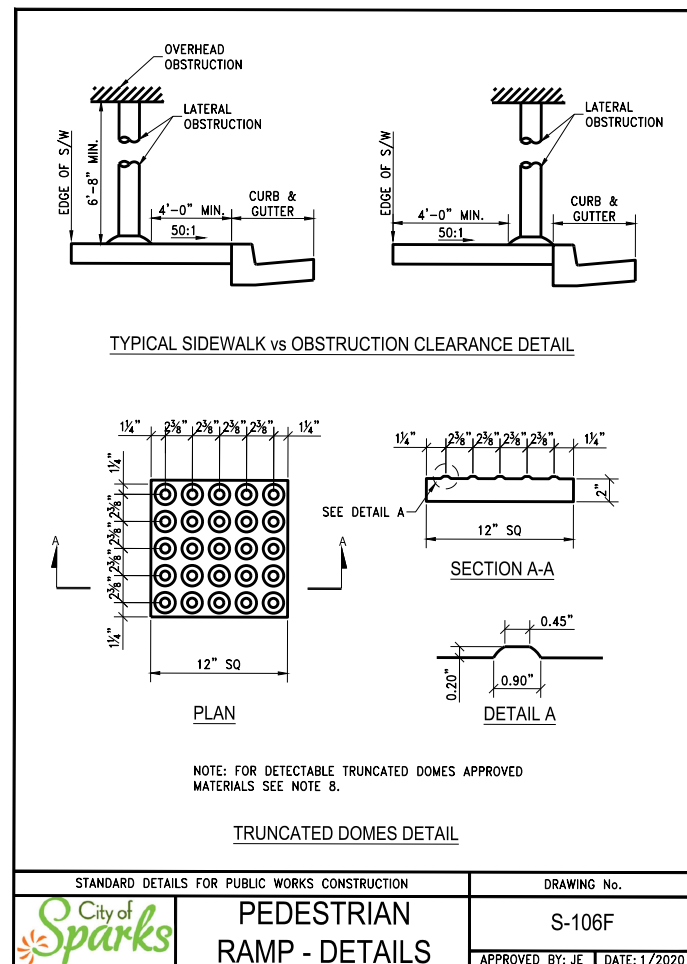
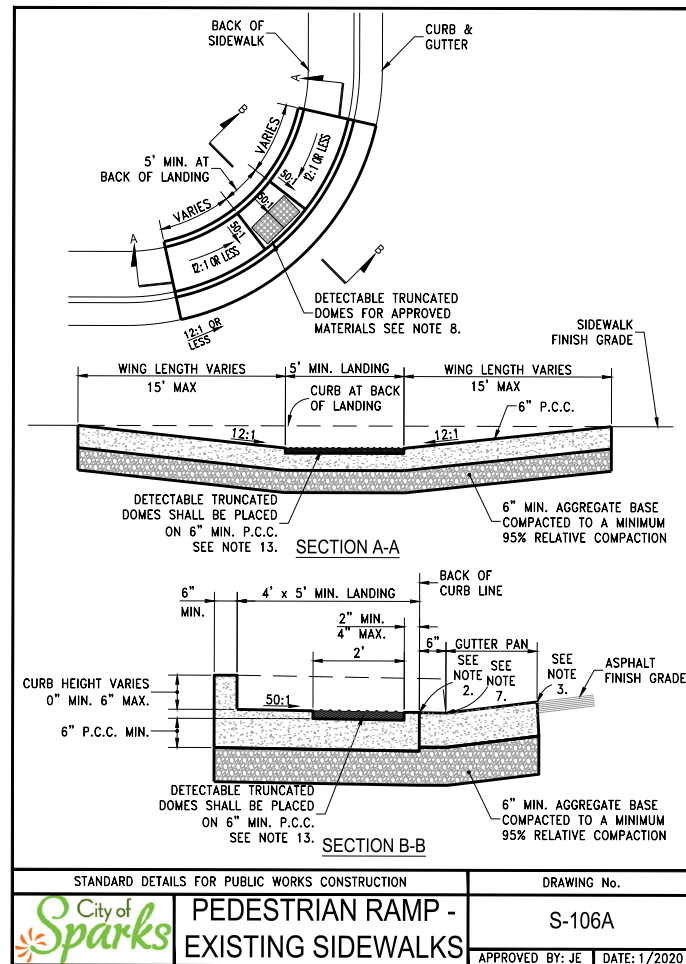
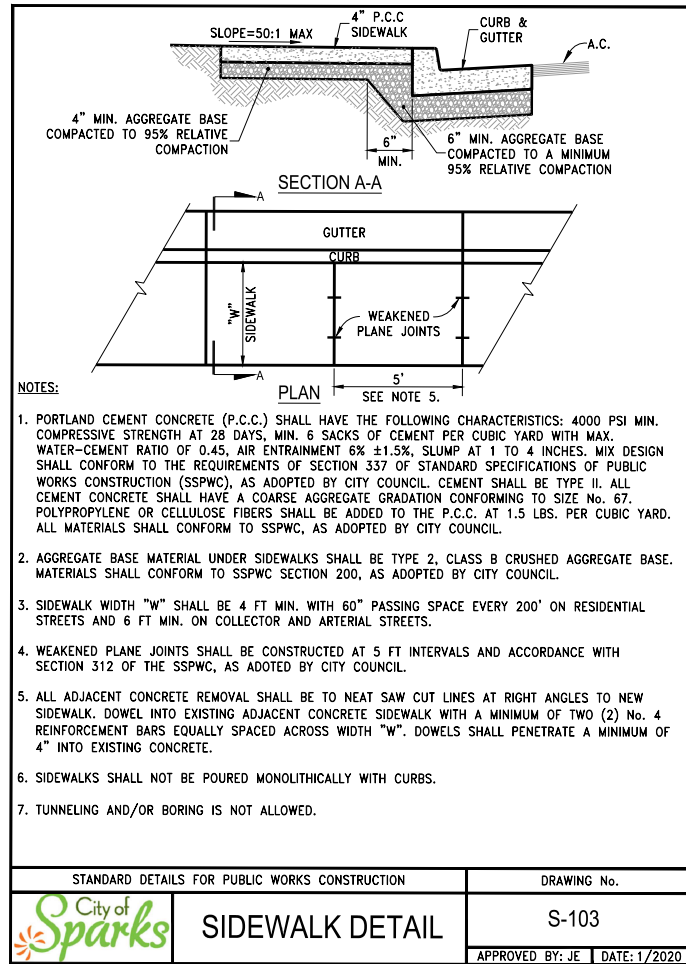
INTERSECTION ENLARGED VIEW - BROOKS CIRCLE AND BOISE DRIVE

22x34 SHEETS = HORIZONTAL: 1"=10'
11x17 SHEETS = HORIZONTAL: 1"=20'

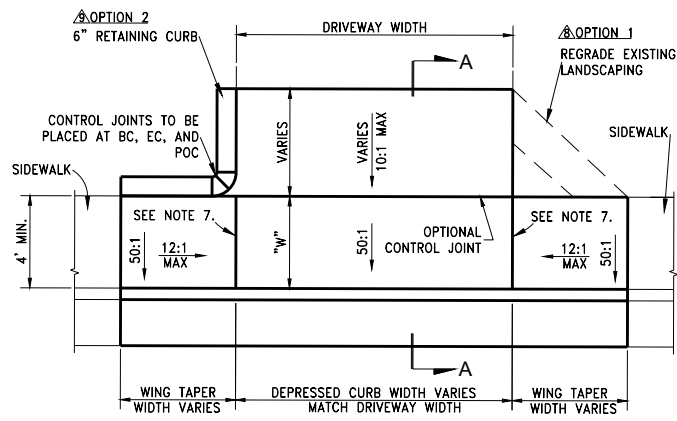


INTERSECTION ENLARGED VIEW - RODGER CIRCLE AND BOISE DRIVE

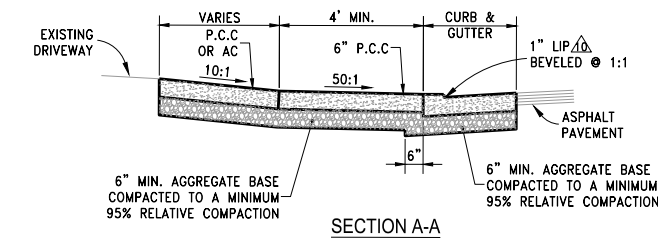
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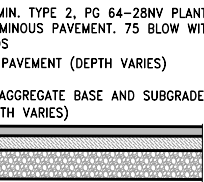
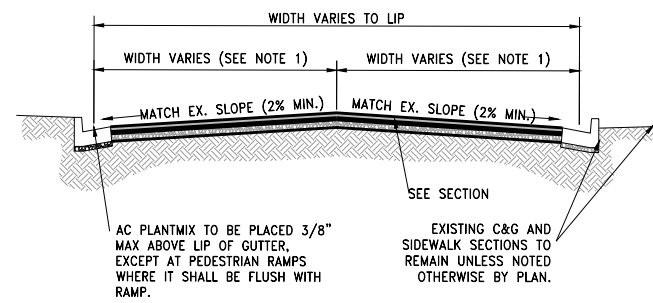


SECTION A-A

C102 ADA P.C.C. DRIVEWAY - APRON EXISTING SCALE: NTS

NOTES:

1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT OF 5% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.
2. AGGREGATE BASE MATERIAL UNDER DRIVEWAYS AND SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
3. RESIDENTIAL DRIVEWAYS SHALL BE POURED SEPARATE FROM CURB AND GUTTER.
4. COMMERCIAL DRIVEWAYS MAY BE POURED MONOLITHIC WITH CURB AND GUTTER. COMMERCIAL DRIVEWAYS TO HAVE #4 BARS AT 18" ON CENTER LONGITUDINAL & TRANSVERSE EXTENDING INTO GUTTER PAN AND DRIVEWAY WINGS. MINIMUM 2" CONCRETE COVER FOR ALL REINFORCING BARS. WHEN COMMERCIAL DRIVEWAY APPROACH AND CURB & GUTTER IS POURED SEPARATELY, IT SHALL BE REQUIRED FOR EACH REINFORCING BAR TO BE DOWELED INTO ADJACENT CURB & GUTTER. DOWELS SHALL #4 REBAR, PENETRATE INTO CURB & GUTTER MINIMUM OF 6" ON CENTER AND BE SECURELY TIED TO THE DRIVEWAY APPROACH REINFORCING.
5. IF JOINT EXISTS WITHIN 4 FEET OF DRIVEWAY, REMOVE SIDEWALK AND CURB AND GUTTER TO THAT JOINT.
6. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES. DOWEL INTO EXISTING ADJACENT DRIVEWAY APPROACH OR SIDEWALK WITH (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
7. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 5 FT INTERVALS AND IN ACCORDANCE WITH SECTION 312 OF THE SSPWC, AS ADOPTED BY CITY COUNCIL.
8. OPTION 1 IS PREFERRED. REGRADE EXISTING LANDSCAPING INCLUDING ADJUSTMENT OF SPRINKLER HEADS, IRRIGATION LINES, ROCK, SOD, ETC.
9. OPTION 2 WILL REQUIRE CITY OF SPARKS APPROVAL PRIOR TO PLACEMENT. THIS OPTION MAY BE NECESSARY TO PROTECT EXISTING FENCING, WALLS, OR FEATURES THAT CANNOT BE REGRADED.
10. A 2" LIP MAY BE NECESSARY AT SELECT LOCATIONS, REFERENCE PLAN SHEETS.



SECTION

NOTES:

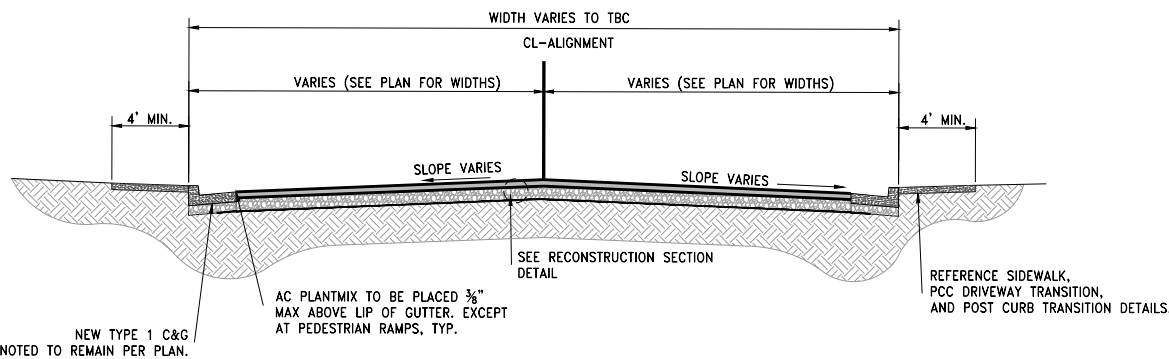
1. FOR STREET WIDTHS SEE PLAN SHEETS.
2. GRIND AND OVERLAY TO LIMITS SHOWN ON PLANS.
3. PROTECT IN PLACE EXISTING UTILITIES AND APPURTENANCES.
4. GRIND AND OVERLAY TO BE COMPLETED ONCE ALL PERMANENT PATCHING IS COMPLETED.
5. CONTRACTOR SHALL PROTECT IN PLACE ALL CONCRETE CURB & GUTTER DURING MILL & OVERLAY CONSTRUCTION ACTIVITIES AT NO DIRECT PAYMENT.
6. PULVERIZE APPROXIMATELY TWO INCHES (2") EXISTING PLANTMIX BITUMINOUS PAVEMENT AFTER COMPLETION OF ALL PERMANENT PATCHING ACTIVITIES.
7. PLACE TWO INCHES (2") PLANTMIX BITUMINOUS PAVEMENT (ONE LIFT) OF TYPE 2, PG 64-28NV PLANTMIX BITUMINOUS PAVEMENT. 75 BLOW WITH 4% VOIDS.
8. IF THE MATERIAL BELOW SUBGRADE IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER, THE TYPICAL OVER EXCAVATION SECTION WILL BE USED, SEE SPECS.
9. CONTRACTOR SHALL BE ADVISED: IF SHALLOW UTILITIES ARE ENCOUNTERED FROM ROADWAY REMOVAL METHOD, THERE SHALL BE NO DIRECT PAYMENT FOR MODIFYING REMOVAL METHOD TO PROTECT UTILITIES.

C103 2" GRIND AND OVERLAY - GREENBRAE DRIVE & PROBASCO WAY SCALE: NTS

NOTES:

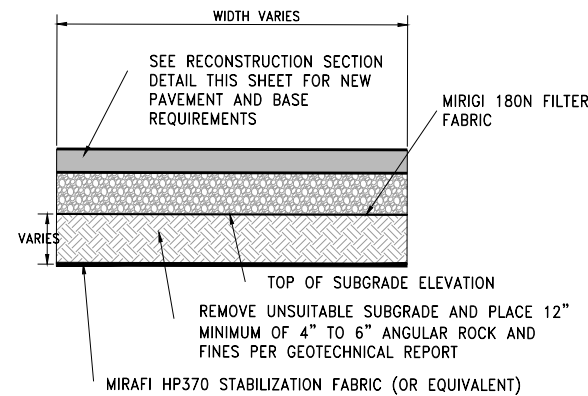
1. FOR STREET WIDTHS SEE PLAN SHEETS.
2. CONTRACTOR SHALL REMOVE ALL CONCRETE GUTTER PANS THAT EXTEND BEYOND PROPOSED LIP OF GUTTER PRIOR TO PULVERIZATION AT NO DIRECT COST.
3. CONTRACTOR SHALL PROTECT IN PLACE ALL IMPROVEMENTS DESIGNATED FOR PROTECTION DURING REMOVAL ACTIVITIES AT NO DIRECT PAYMENT.
4. PULVERIZE THE EXISTING ASPHALT, BASE, AND SUBGRADE SOILS TO A DEPTH OF TWELVE INCHES (12"). PULVERIZED MATERIAL SHALL MEET THE REQUIREMENTS OF TYPE 1 RECYCLED AGGREGATE BASE.
5. HAUL AWAY EXCESS MATERIAL TO ACCOMMODATE 4-INCH PLANTMIX BITUMINOUS PAVEMENT. MOISTURE CONDITION REMAINING EIGHT INCHES (8") TO AT LEAST TWO PERCENT (2%) OF OPTIMUM, AND COMPACT TO A MINIMUM OF NINETY-FIVE PERCENT (95%) RELATIVE TO ASTM D1557.
6. PLACE FOUR INCHES (4") OF PLANTMIX BITUMINOUS PAVEMENT WITH TYPE III AGGREGATE, PG64-28NV BINDER, WITH 50 BLOW MARSHAL MIX TARGETING 3% AIR VOIDS OR TWO INCHES (2") OF PLANTMIX BITUMINOUS PAVEMENT WITH TYPE II AGGREGATE, PG-28NV BINDER, WITH 50 BLOW MARSHAL MIX TARGETING 4% AIR VOIDS ON BOTTOM WITH TWO INCHES (2") OF PLANTMIX BITUMINOUS PAVEMENT WITH TYPE III AGGREGATE, PG64-28NV BINDER, WITH 50 BLOW MARSHAL MIX TARGETING 3% AIR VOIDS PLACED ON TOP. THE ASPHALT SHALL BE COMPACTED TO BETWEEN NINETY-TWO PERCENT (92%) AND NINETY-SEVEN PERCENT (97%) OF THE THEORETICAL MAXIMUM ("RICE") SPECIFIC GRAVITY.
7. IF THE MATERIAL BELOW SUBGRADE IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER, THE TYPICAL OVER EXCAVATION SECTION WILL BE USED.
8. ANY ADDITIONAL MATERIAL REMOVED BELOW THE TOP OF SUBGRADE ELEVATION IN ORDER TO MEET NEW ROADWAY SECTION GRADING SHALL BE REMOVED AT NO DIRECT PAYMENT.
9. CONTRACTOR SHALL BE ADVISED: IF SHALLOW UTILITIES ARE ENCOUNTERED FROM ROADWAY REMOVAL METHOD, THERE SHALL BE NO DIRECT PAYMENT FOR MODIFYING REMOVAL METHOD TO PROTECT UTILITIES.

C104 TYPICAL RECONSTRUCTION SECTION - QUAIL STREET, BOISE DRIVE, BROOKS CIRCLE, & RODGER CIRCLE SCALE: NTS



CENTERLINE CROWN

C105 TYPICAL ROADWAY RECONSTRUCTION CROSS SECTION - QUAIL STREET, BOISE DRIVE, BROOKS CIRCLE, & RODGER CIRCLE SCALE: NTS



NOTES:

1. LIMITS OF OVER EXCAVATION, WIDTHS, AND DEPTH TO BE DETERMINED BY THE ENGINEER.

C106 TYPICAL OVER-EXCAVATION SECTION SCALE: NTS



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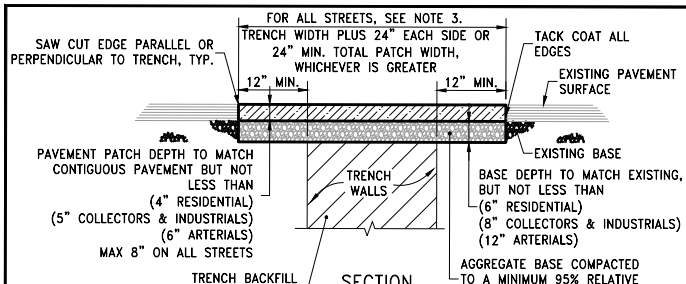


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
DETAIL SHEET
NEVADA
SPARKS
WASHOE

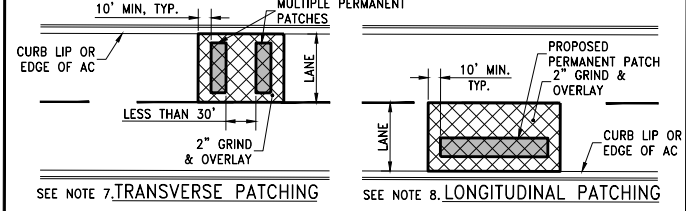
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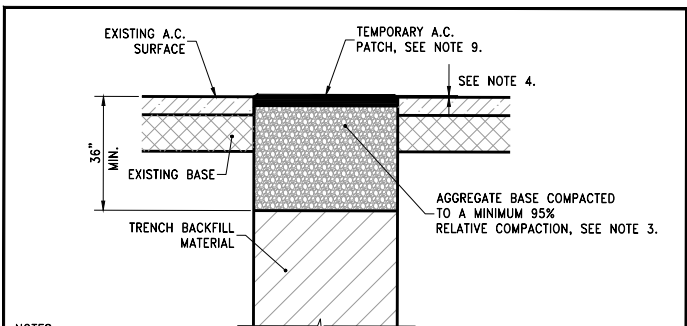


- NOTES:
1. AN EXCAVATION/ENCROACHMENT PERMIT MUST BE OBTAINED FROM CITY OF SPARKS PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY.
 2. IF SAW CUT IS WITHIN 2 FEET OF AN EXISTING PAVEMENT EDGE OR EXISTING PAVEMENT PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
 3. ALL PERMANENT PATCH REQUIREMENTS ARE MINIMUM WIDTHS ONLY AND INCLUDE ALL AREAS WHERE THE ASPHALT PAVEMENT HAS BEEN UNDERMINED. THE CITY ENGINEER MAY REQUIRE WIDER PATCH SECTIONS OR OTHERWISE ALTER THESE REQUIREMENTS.
 4. AGGREGATE BASE MATERIAL UNDER BITUMINOUS PAVEMENT PATCH SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF LOOP DETECTORS, ADJUSTMENT OF UTILITIES AND SURVEY MONUMENTS TO GRADE AND INSTALLATION OF PERMANENT PAVEMENT MARKINGS.
 6. FOR P.C.C. CURB REPLACEMENT, SAW CUT EXISTING PAVEMENT 18 INCHES MIN. FROM CUTTER LIP LINE, REMOVE AND REPLACE PAVEMENT TO SAW CUT EDGES. CONCRETE MAY BE POURED NEAT AGAINST EXISTING EDGE OF ASPHALT IF APPROVED BY CITY ENGINEER.



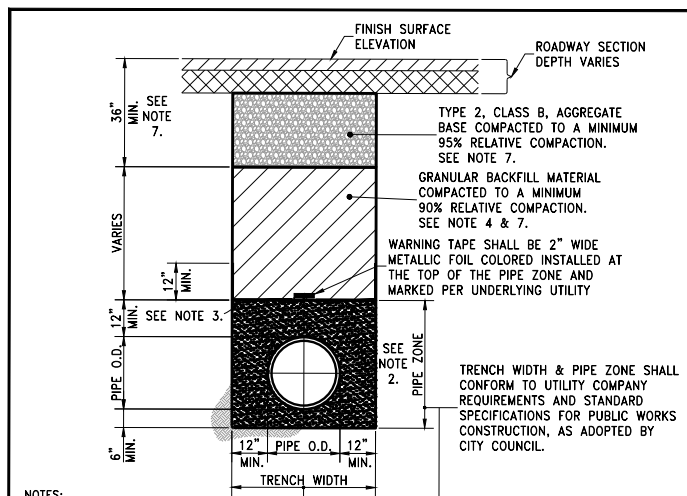
- ALL STREETS WITH PAVEMENT CONDITION INDEX (PCI) GREATER THAN 65:
7. TRANSVERSE PATCHES SHALL INCLUDE A GRIND AND OVERLAY WHEREVER THERE ARE MULTIPLE PATCHES WITHIN 30 FEET OF EACH OTHER. 2" MINIMUM FOR RESIDENTIAL, COLLECTORS & INDUSTRIALS. 3" MINIMUM FOR ARTERIALS.
 8. LONGITUDINAL PATCHES SHALL INCLUDE GRIND AND OVERLAY TO THE LANE LINES (BIKE, PARKING, OR TRAVEL). 2" MINIMUM FOR RESIDENTIAL, COLLECTORS & INDUSTRIALS. 3" MINIMUM FOR ARTERIALS.
 9. DRIVEWAY & INTERSECTION LIMITS TO BE DETERMINED BY STREET CUT COORDINATOR.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
PERMANENT BITUMINOUS PAVEMENT PATCH	S-115
APPROVED BY: JE DATE: 1/2020	



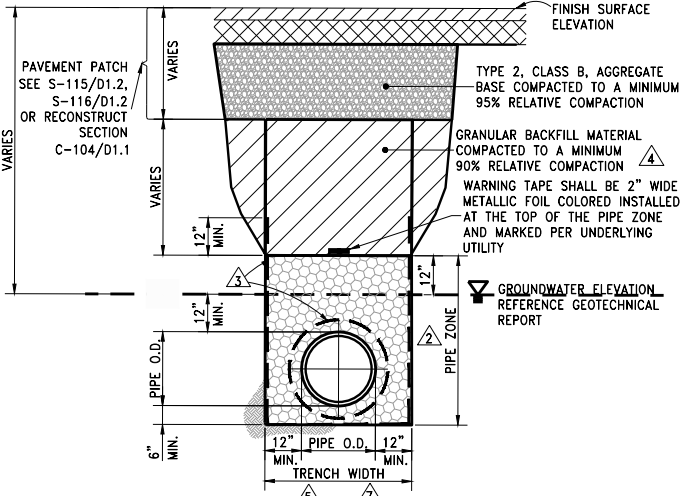
- NOTES:
1. PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THROUGH THE EXISTING ASPHALT SURFACE.
 2. CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT.
 3. AGGREGATE BASE UNDER TEMPORARY PATCH SHALL BE A MINIMUM THICKNESS OF 36 INCHES BELOW THE EXISTING AC SURFACE. AGGREGATE BASE MATERIAL UNDER TEMPORARY PATCH SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
 4. TEMPORARY PATCHES SHALL BE PLACED AND COMPACTED. THE COMPACTED PATCH SHALL BE APPROXIMATELY 1/8" TO 1/4" ABOVE THE LEVEL OF THE ADJACENT PAVEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, THE CITY MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR ALL COSTS.
 5. COMPACTION OF BACKFILL, BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.
 6. ENTIRE AREA SHALL BE CLEANED OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. ANY SITE LEFT UNCLEANED WILL BE CLEANED BY THE CITY AND ALL COSTS BACK-CHARGED TO THE CONTRACTOR.
 7. ALL EXCAVATIONS SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE SHIFT, INCLUDING TEMPORARY PATCH.
 8. TEMPORARY PATCH WORK AND PATCH MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 9. ALL TEMPORARY PATCHES ON ALL STREETS SHALL BE HOT-MIX ASPHALT A MINIMUM OF 3" THICK.
 10. PLATES MAY BE USED UPON APPROVAL FROM THE CITY ENGINEER.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TEMPORARY A.C. TRENCH PATCH	S-116
APPROVED BY: JE DATE: 1/2020	



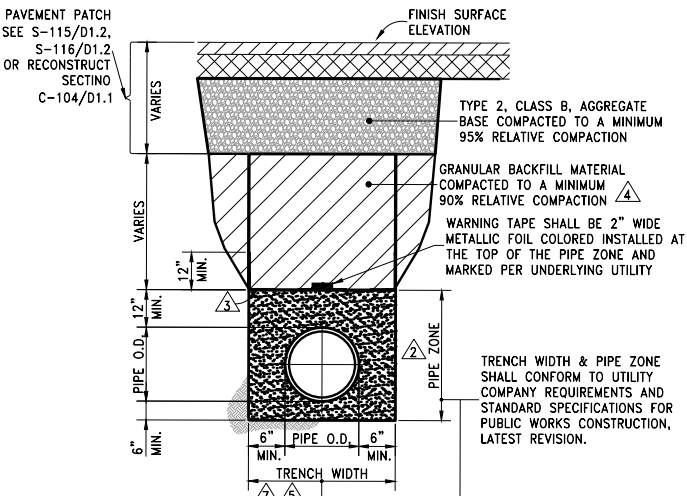
- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL.
 2. BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY-OWNED UTILITIES, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
 3. CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
 4. BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
 6. EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED.
 7. MINIMUM BACKFILL DEPTH REQUIREMENT IS FOR TRENCHING IN EXISTING PAVED STREETS. TRENCHING FOR NEW DEVELOPMENT WHERE STREETS HAVE NOT YET BEEN CONSTRUCTED, BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
TRENCH EXCAVATION/BACKFILL	S-117
APPROVED BY: JE DATE: 1/2020	



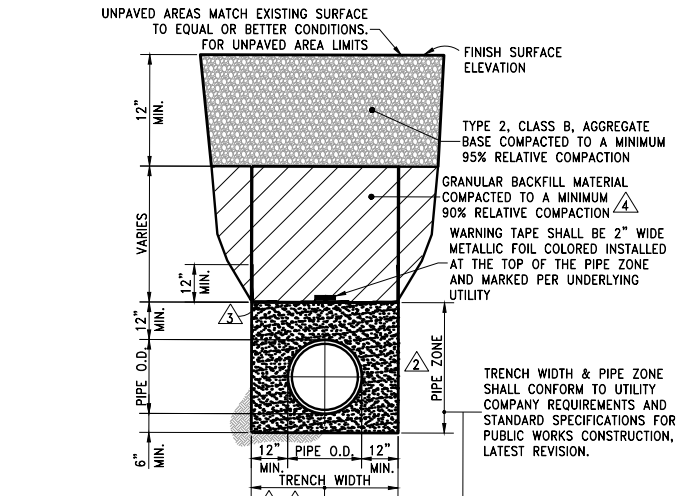
- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), LATEST REVISION.
 2. BEDDING MATERIAL SHALL BE CLASS C DRAIN ROCK. IT SHALL MEET THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS. DRAIN ROCK SHALL EXTEND AT LEAST 12" ABOVE THE TOP OF PIPE ELEVATION. CLASS C DRAIN ROCK SHALL BE PLACED IN ONE FOOT LIFTS AND COMPACTED WITH A VIBRA PLATE TO THE SATISFACTION OF THE ENGINEER.
 3. CLASS C DRAIN ROCK BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC TO ENCASE THE PIPE AND SURROUNDING BEDDING AREA AND EXTEND ABOVE BEDDING BY A MINIMUM OF 12 INCHES. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
 4. BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
 6. EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED. WHERE PIPE IS SHOWN ON PLAN SHEETS TO BE REMOVED, TRENCH WIDTH SHALL EXTEND TO INCLUDE REMOVAL, DISPOSAL OF EXISTING PIPE, BACKFILL AND SURFACE RESTORATION ACCORDING TO THE PLANS AND SPECIFICATIONS.
 7. CONTRACTOR SHALL NOTE THAT TRENCH WIDTH SHOWN IS MINIMUM. CONTRACTOR IS CAUTIONED THAT THEY MAY ENCOUNTER UNSTABLE TRENCH WALLS DUE TO LARGE BOULDERS AND/OR GRANULAR BACKFILL FROM ADJACENT UTILITIES. SPECIAL CONSTRUCTION TECHNIQUES, WIDER TRENCH WIDTH, ADDITIONAL TRENCHING, BACKFILL AND SURFACE RESTORATION MAY BE NECESSARY AND WILL NOT BE SUBJECT TO ADDITIONAL PAYMENT.
 8. WHERE SANITARY SEWER MAIN CROSSES TMWA OWNED WATER MAIN FACILITIES, SEE DETAIL SHEET D1.7.

C107	TRENCH EXCAVATION/BACKFILL - GROUNDWATER	SCALE: NTS
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- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), LATEST REVISION.
 2. BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY OF SPARKS SANITARY SEWER AND STORM DRAINAGE, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
 3. CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
 4. BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
 6. EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED. WHERE PIPE IS SHOWN ON PLAN SHEETS TO BE REMOVED, TRENCH WIDTH SHALL EXTEND TO INCLUDE REMOVAL, DISPOSAL OF EXISTING PIPE, BACKFILL AND SURFACE RESTORATION ACCORDING TO THE PLANS AND SPECIFICATIONS.
 7. CONTRACTOR SHALL NOTE THAT TRENCH WIDTH SHOWN IS MINIMUM. CONTRACTOR IS CAUTIONED THAT THEY MAY ENCOUNTER UNSTABLE TRENCH WALLS DUE TO LARGE BOULDERS AND/OR GRANULAR BACKFILL FROM ADJACENT UTILITIES. SPECIAL CONSTRUCTION TECHNIQUES, WIDER TRENCH WIDTH, ADDITIONAL TRENCHING, BACKFILL AND SURFACE RESTORATION MAY BE NECESSARY AND WILL NOT BE SUBJECT TO ADDITIONAL PAYMENT.
 8. WHERE SANITARY SEWER MAIN CROSSES TMWA OWNED WATER MAIN FACILITIES, SEE DETAIL SHEET D1.7.

C108	TRENCH EXCAVATION/BACKFILL - SEWER LATERALS	SCALE: NTS
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- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), LATEST REVISION.
 2. BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY OF SPARKS SANITARY SEWER AND STORM DRAINAGE, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
 3. CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
 4. BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
 6. EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED. WHERE PIPE IS SHOWN ON PLAN SHEETS TO BE REMOVED, TRENCH WIDTH SHALL EXTEND TO INCLUDE REMOVAL, DISPOSAL OF EXISTING PIPE, BACKFILL AND SURFACE RESTORATION ACCORDING TO THE PLANS AND SPECIFICATIONS.
 7. CONTRACTOR SHALL NOTE THAT TRENCH WIDTH SHOWN IS MINIMUM. CONTRACTOR IS CAUTIONED THAT THEY MAY ENCOUNTER UNSTABLE TRENCH WALLS DUE TO LARGE BOULDERS AND/OR GRANULAR BACKFILL FROM ADJACENT UTILITIES. SPECIAL CONSTRUCTION TECHNIQUES, WIDER TRENCH WIDTH, ADDITIONAL TRENCHING, BACKFILL AND SURFACE RESTORATION MAY BE NECESSARY AND WILL NOT BE SUBJECT TO ADDITIONAL PAYMENT.
 8. WHERE SANITARY SEWER MAIN CROSSES TMWA OWNED WATER MAIN FACILITIES, SEE DETAIL SHEET D1.7.

C109	TRENCH EXCAVATION/BACKFILL - UNPAVED AREAS	SCALE: NTS
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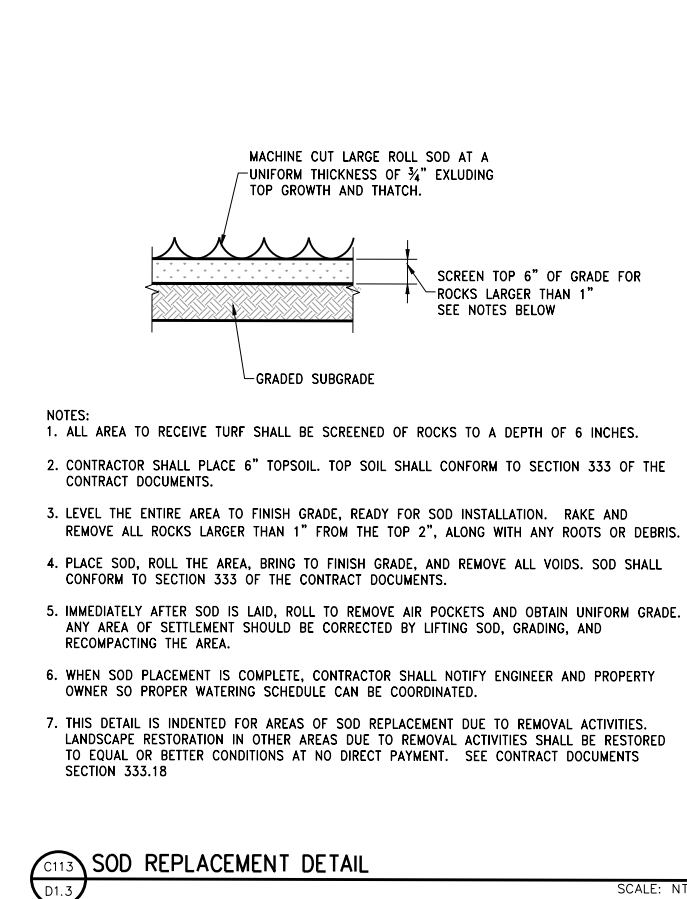
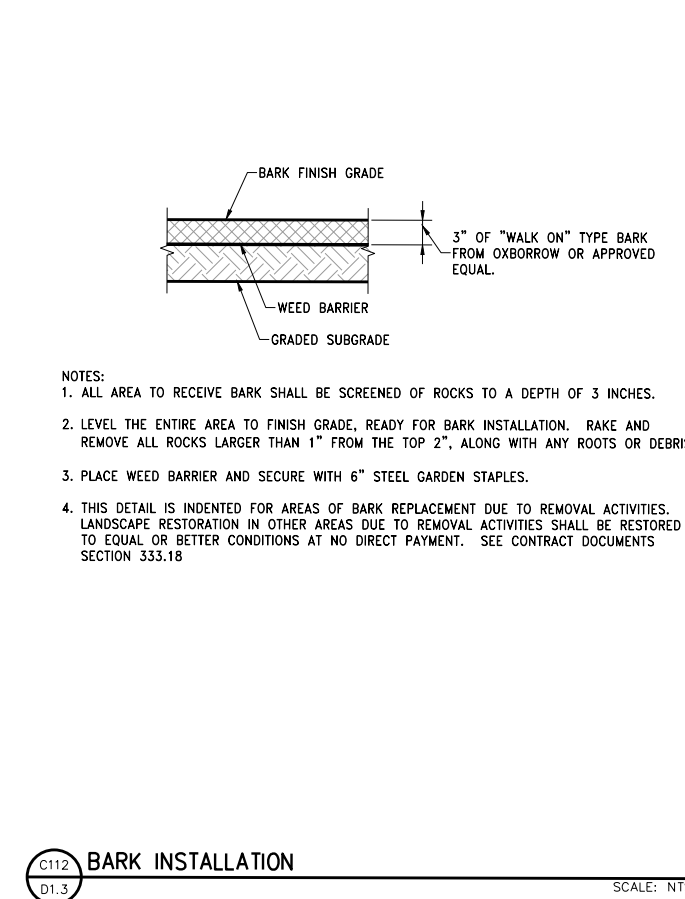
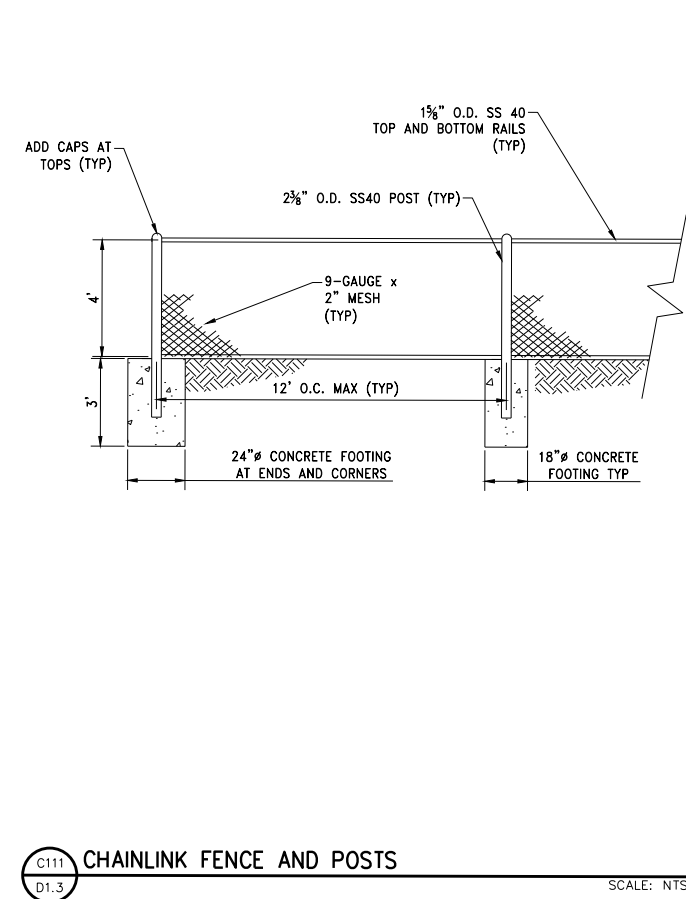
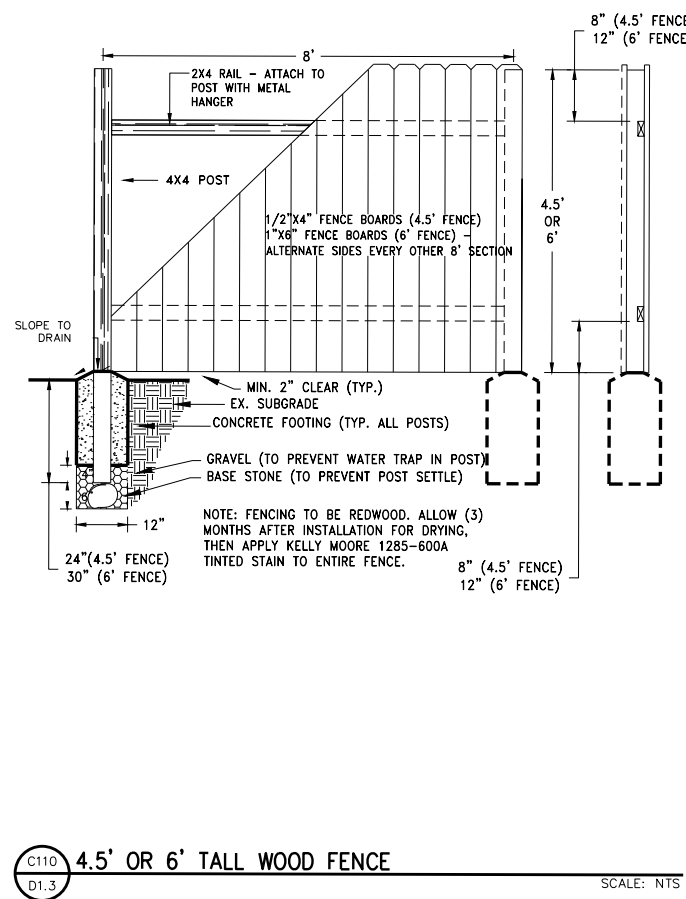
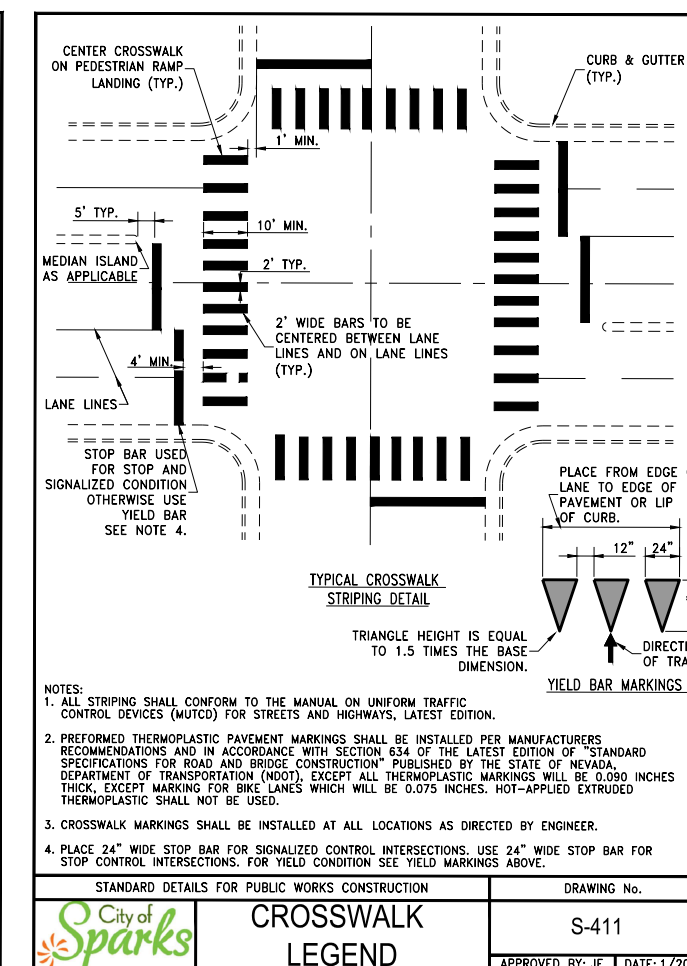
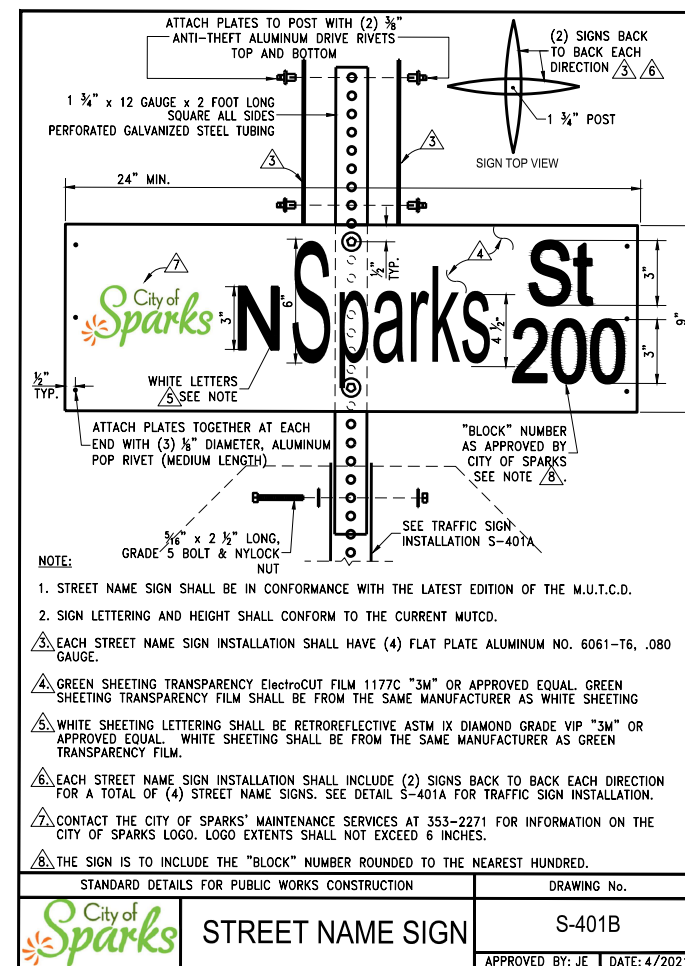
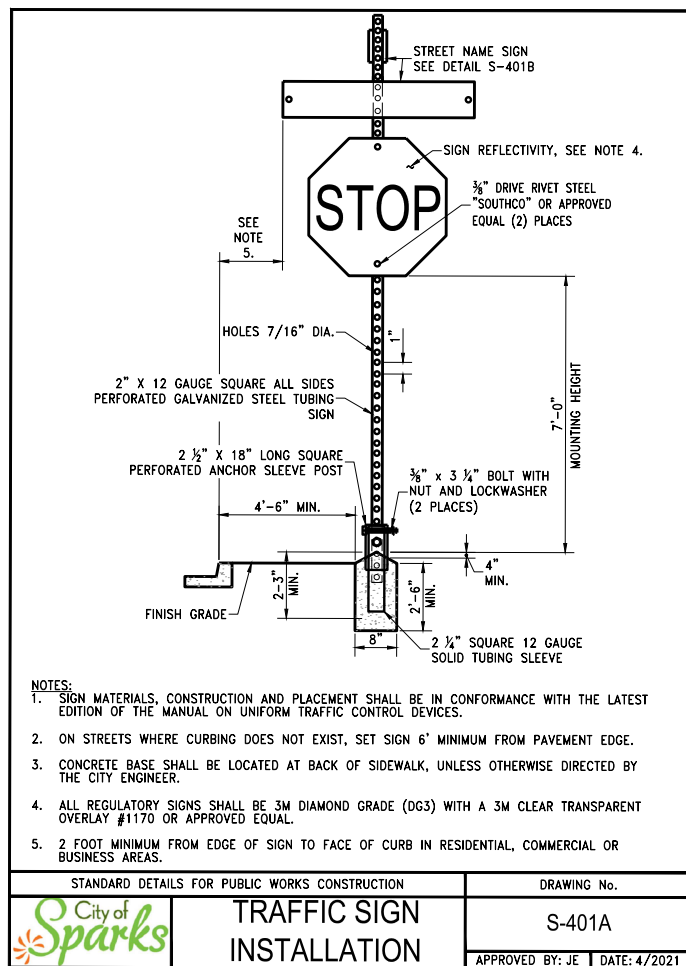
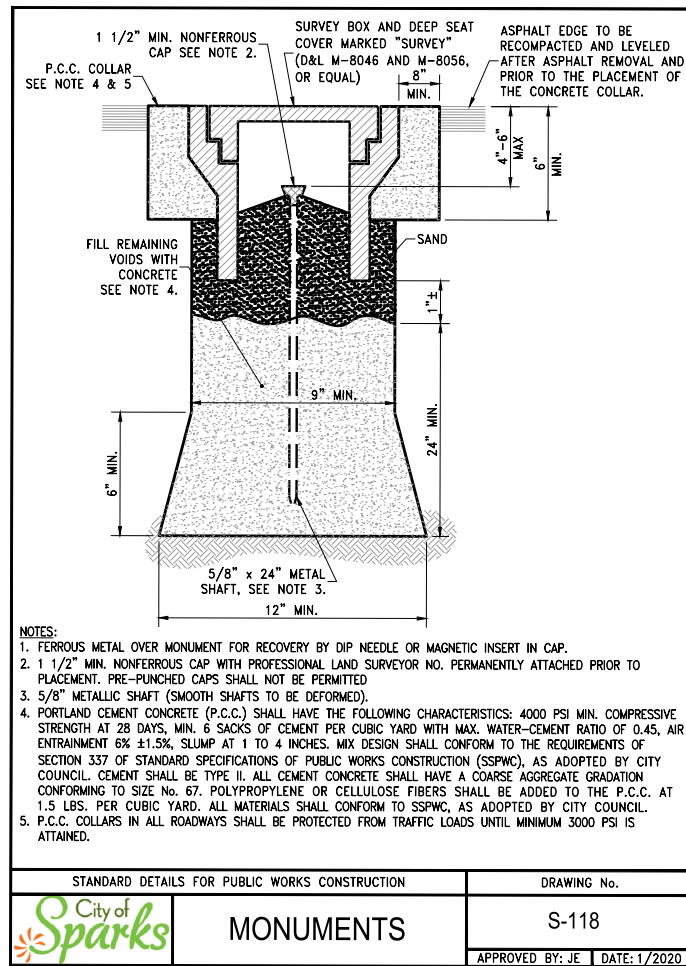


CITY OF SPARKS
BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
DETAIL SHEET
NEVADA
SPARKS
WASHOE

REV	DATE	DESCRIPTION

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JOB NO.: 10565.000

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BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT
DETAIL SHEET

CITY OF SPARKS

NEVADA
 WASHOE
 SPARKS

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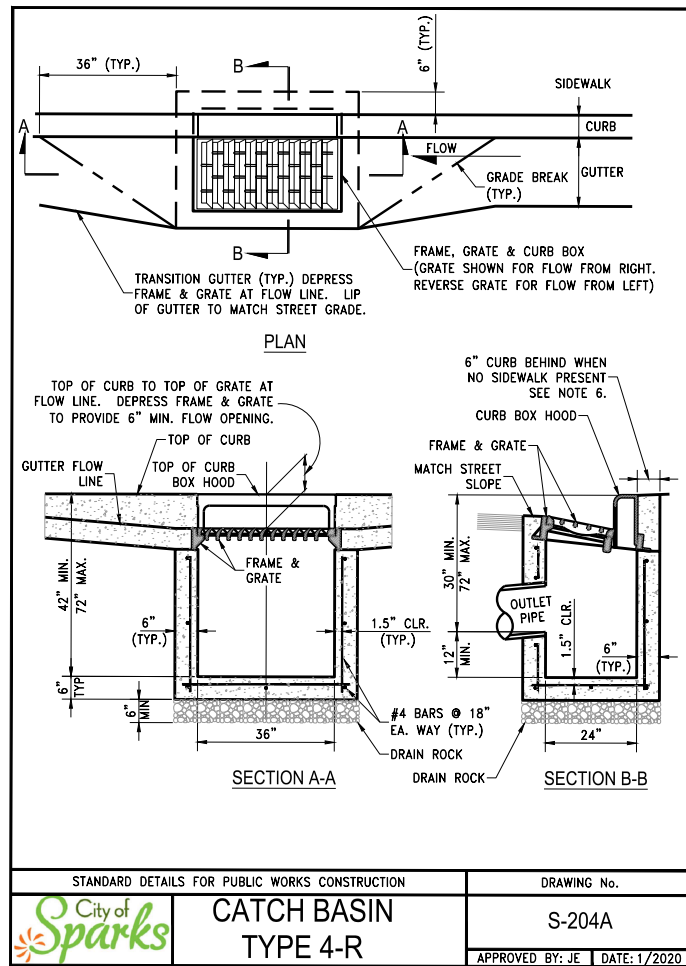
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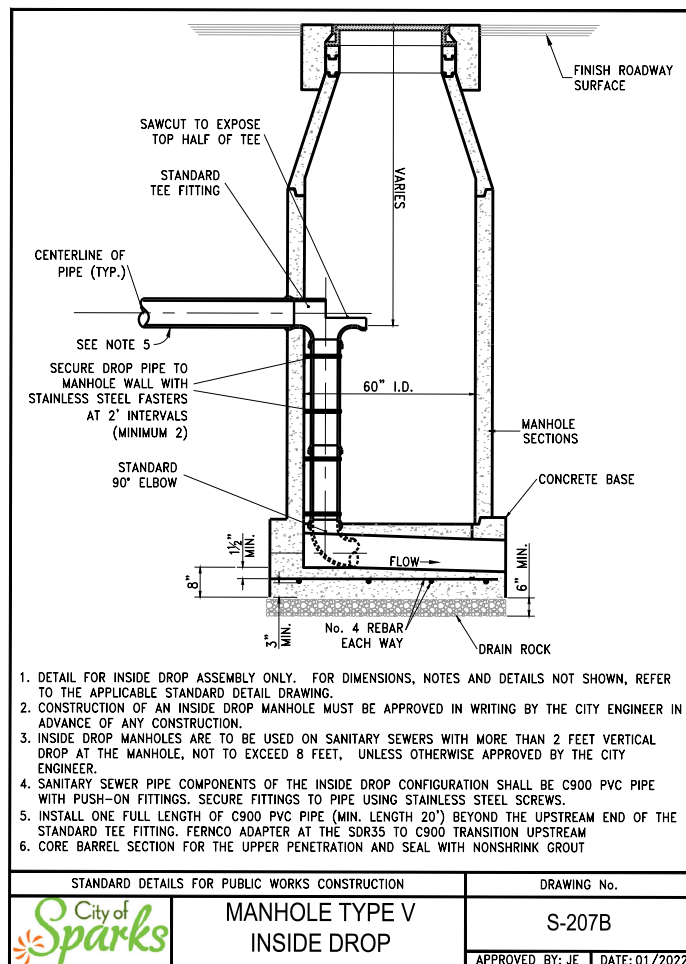
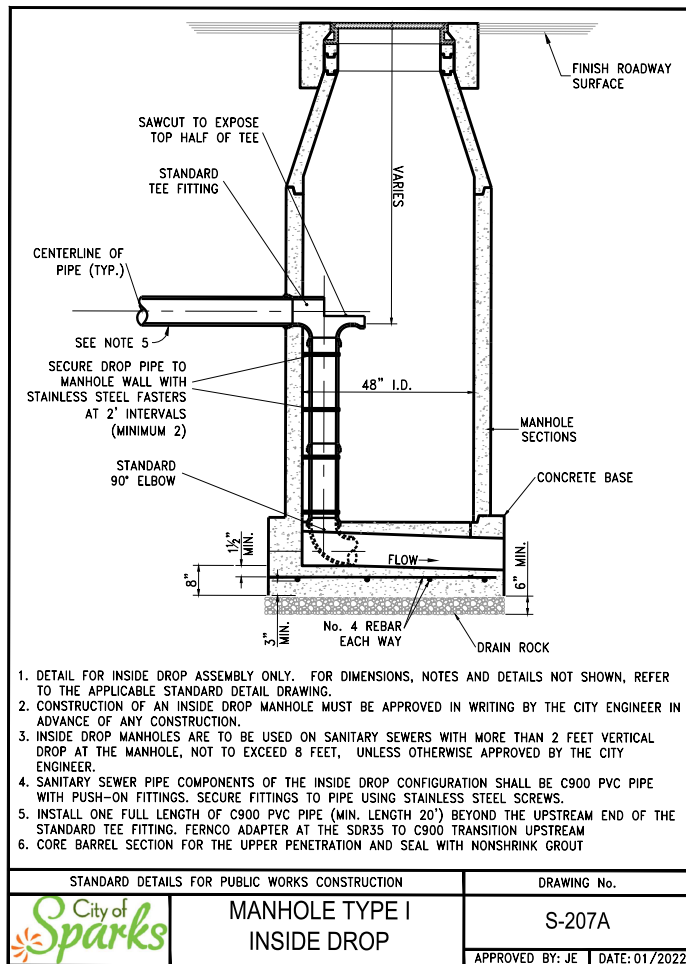
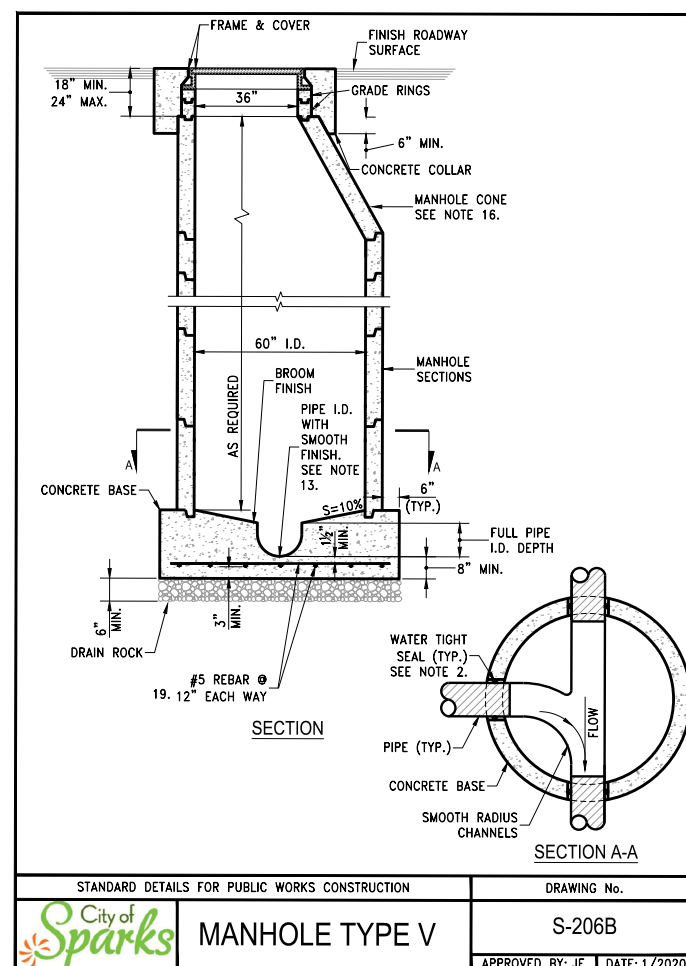
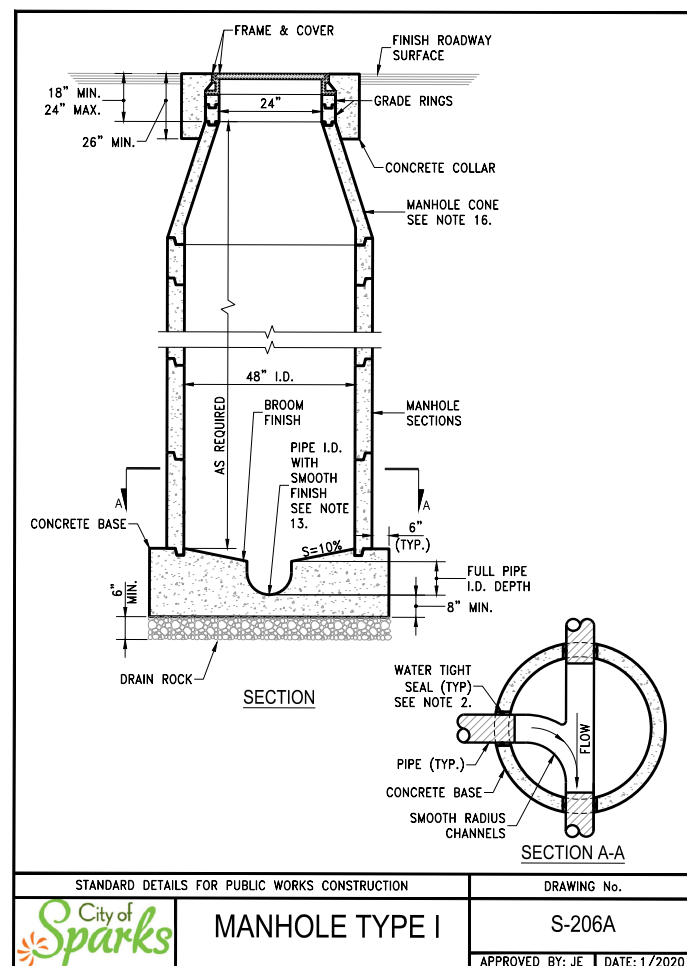
NOTES:

- P.C.C CURB AND GUTTER TRANSITION SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE NO. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.
- REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
- CONCRETE STRUCTURE MAY BE A CAST-IN-PLACE CONCRETE UNIT UPON APPROVAL OF THE CITY ENGINEER. BASE OF CAST-IN-PLACE CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
- FRAME, GRATE AND CURB BOX HOOD ASSEMBLY SHALL BE D&L I-3519 WITH TYPE L "VANE GRATE" OR APPROVED EQUAL. GRATE SHALL BE INSTALLED WITH PROPER FLOW DIRECTION. EACH CATCH BASIN SHALL BE CAST WITH A FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO RIVERS" IN THE TOP OF EACH CURB HOOD.
- TLT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN. FLOW OPENING & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).
- WHEN SIDEWALK IS PRESENT CONCRETE BEHIND CURB BOX SHALL BE THICKENED TO THE FULL DEPTH OF THE CURB BOX. IF NO SIDEWALK IS PRESENT, POUR 6" CONCRETE CURB STRUCTURE BEHIND GRATE AND TIE BEAM INTO BOX.
- ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.
- FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT WITH MINIMAL GAPS.
- CATCH BASIN SHALL NOT BE PLACED WITHIN THE RADIUS OF THE CURB UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

DRAWING No. S-204B

APPROVED BY: JE DATE: 1/2020



GENERAL MANHOLE NOTES

- ALL PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
- PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION AS MEASURED AT THE OUTSIDE EDGES OF THE PIPE, VERTICALLY ALIGNED WITH THE SPRINGLINE. PIPE CONNECTION TO MANHOLE SHALL BE WATERTIGHT PER STANDARD DETAILS S-211A, S-211B AND S-211C.
- MANHOLE BASE SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
- TYPE I MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 12" OR SMALLER AND DEPTHS NOT EXCEEDING 18 FEET.
- TYPE V MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 15" THROUGH 27" OR DEPTHS EXCEEDING 18 FEET.
- MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
- PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
- EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 OF THE STANDARD SPECIFICATIONS.
- EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EASEMENTS OR ADJACENT STRUCTURES.
- MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
- NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
- PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
- MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE.
- ALL MANHOLES SHALL BE WATERTIGHT.
- SEE DETAIL FOR INSIDE DROP MANHOLE FOR SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE. THE USE OF "OUTSIDE DROP" MANHOLES IS NOT PERMITTED.
- NO STEPS, LADDERS, OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN THE MANHOLE.
- REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST 1 1/2" CLEAR, UNLESS OTHERWISE NOTED.
- WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION PER DETAIL S-211A & S-211B.
- TYPE IV MANHOLES SHOULD ONLY BE USED AS APPROVED BY CITY ENGINEER
- ALL MANHOLE BARREL JOINTS TO BE RAPPED WITH EXTERNAL JOINT WRAP M-860 OR APPROVED EQUAL.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

DRAWING No. S-206D

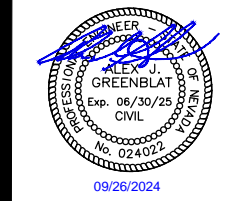
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CITY OF SPARKS

BOISE DRIVE SEWER INTERCEPTOR REHABILITATION PROJECT

DETAIL SHEET

NEVADA

WASHOE

SPARKS

BY: _____

DESCRIPTION

REV. DATE

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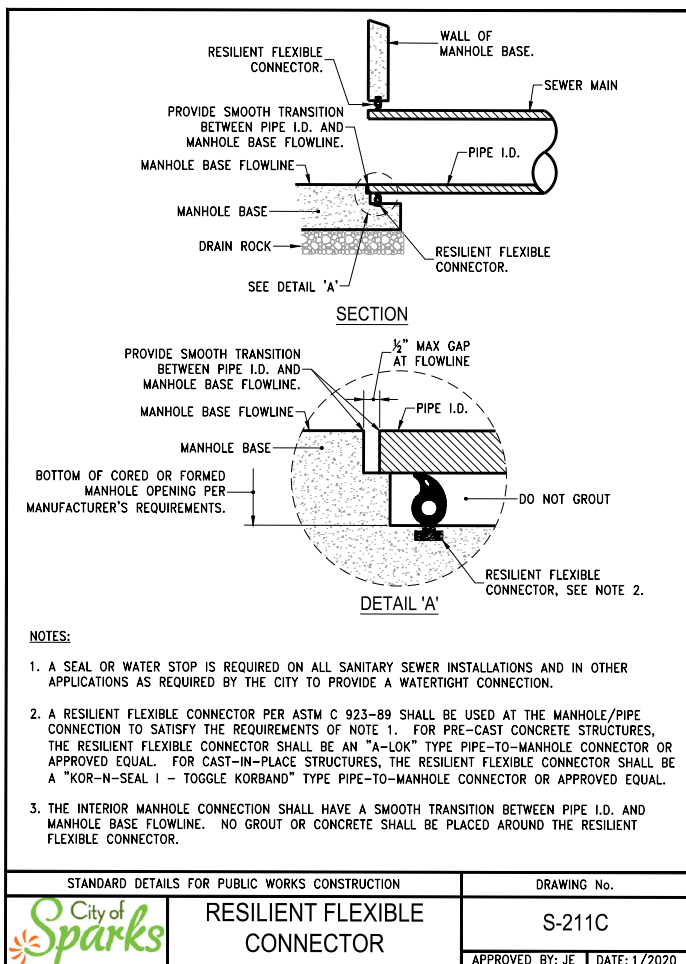
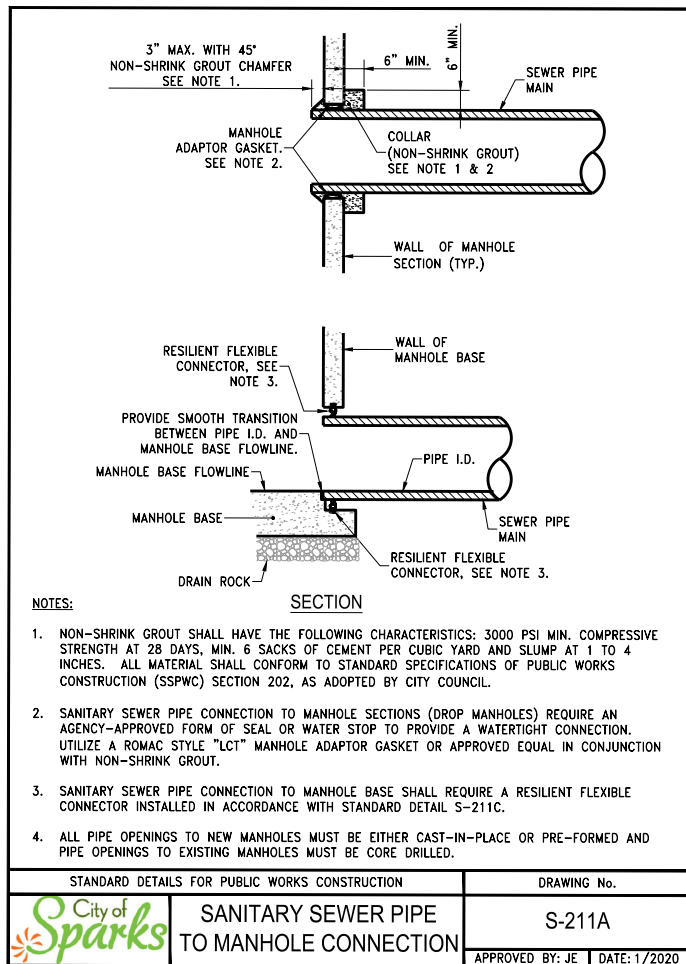
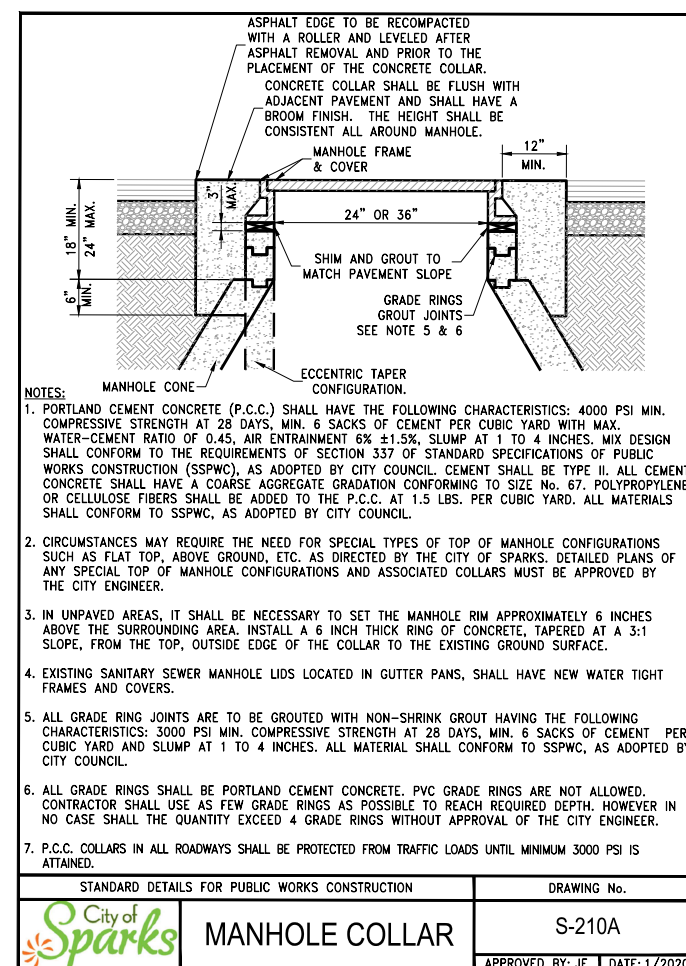
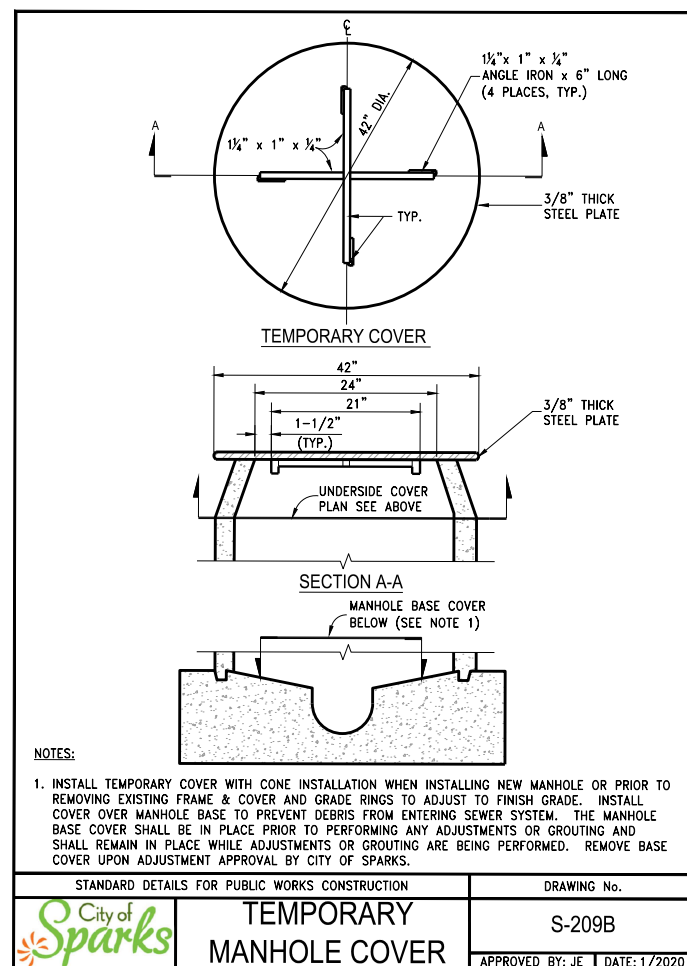
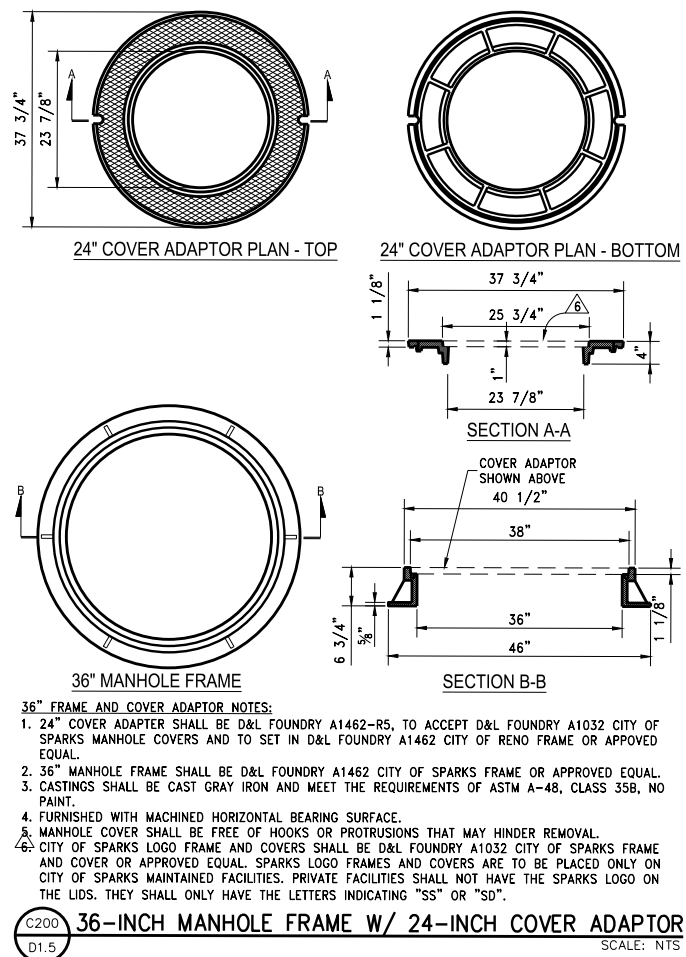
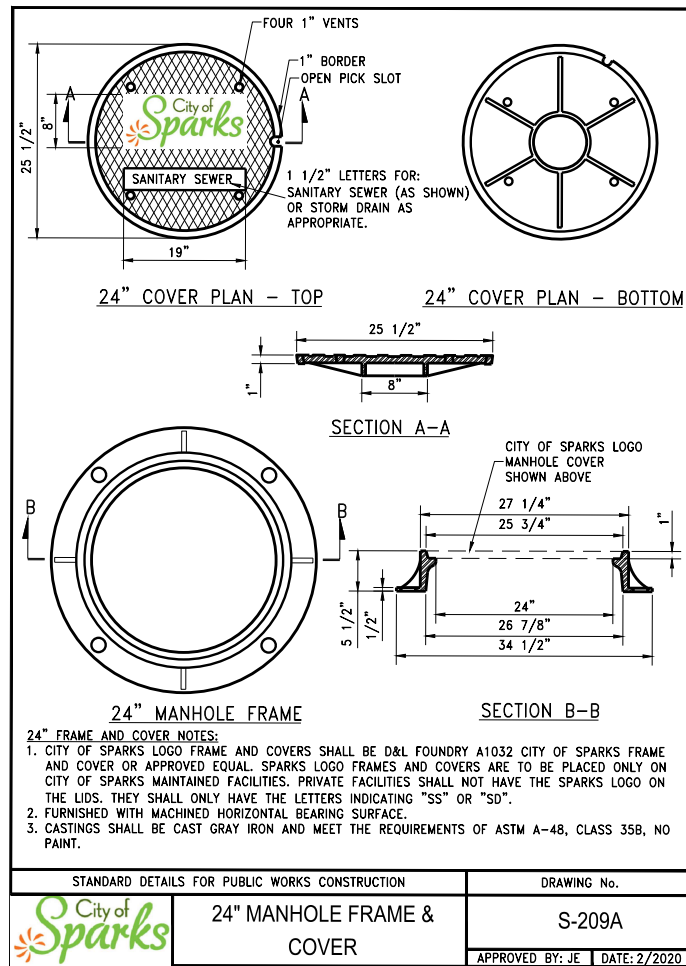
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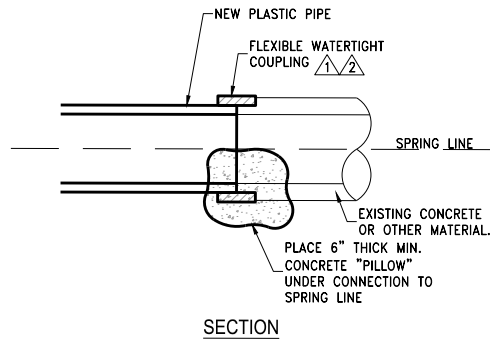
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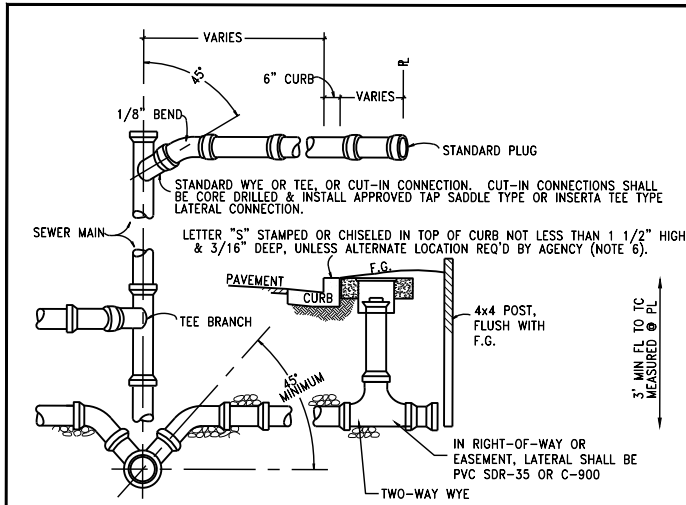
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- NOTES:
1. RC5000 STRONG BACK COUPLING OR APPROVED EQUAL SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
 2. CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING PIPE AND PROVIDE PROPER FLEXIBLE WATERTIGHT COUPLINGS. IF CIPP IS ENCOUNTERED, EPOXY LINER AT END OF PIPE.

C201 EXISTING PIPE TO NEW PVC PIPE CONNECTION SCALE: NTS

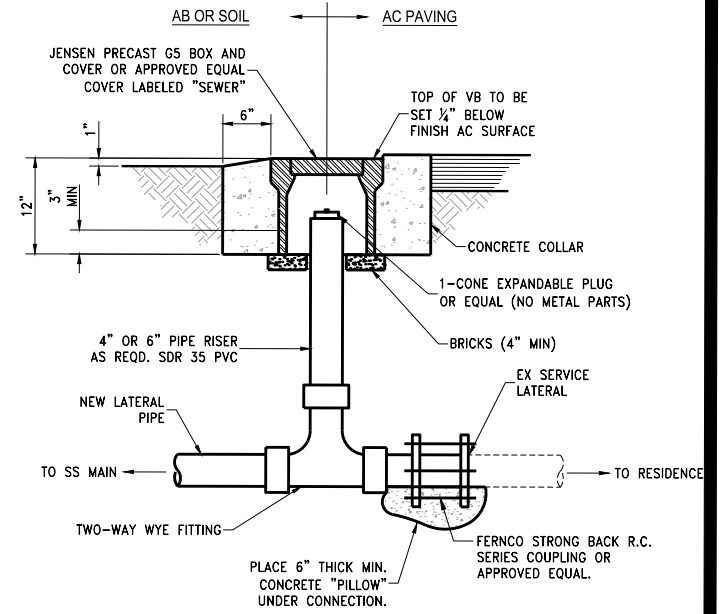


- NOTES:
1. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 2. LATERAL SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING.
 3. ALL CONNECTIONS TO THE CITY SEWER MAINS MUST BE CORE DRILLED.
 4. ENCASE LATERAL CONNECTION IN CEMENT, STABILIZED SAND OR 2000 PSI CONCRETE FOLLOWING INSTALLATION. CONNECTION MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
 5. NO LATERAL CONNECTIONS SHALL BE MADE TO SANITARY SEWER "INTERCEPTOR" LINES WITHOUT THE APPROVAL OF THE CITY ENGINEER.
 6. ALL APPLICABLE SANITARY SEWER PIPE INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION DRAWING No. S-212A
 City of Sparks SANITARY SEWER LATERAL APPROVED BY: JE DATE: 1/2020

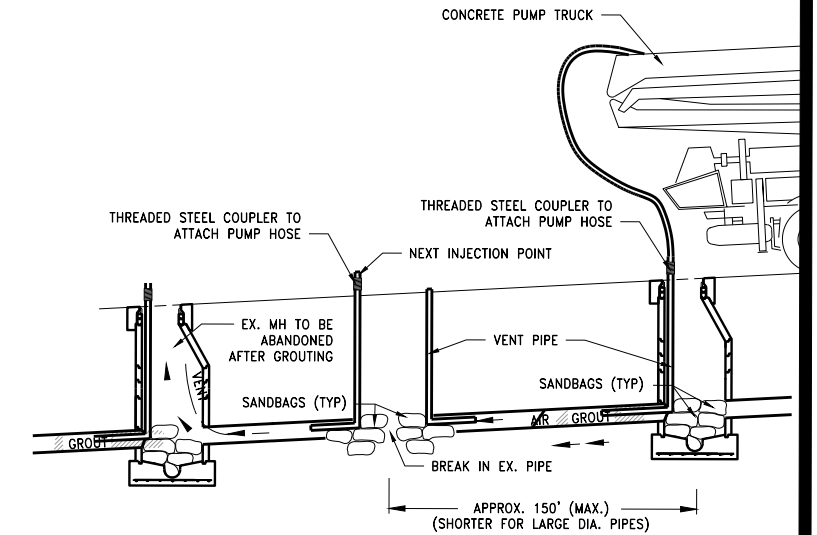
- NOTES:
1. SEWER LATERALS SHALL HAVE A MINIMUM PIPE DIAMETER OF 4-INCHES.
 2. ALL PLASTIC PIPE USED FOR SEWER SERVICE LATERAL CONSTRUCTION SHALL BE SOLID WALL AND SHALL MEET THE REQUIREMENTS OF D-2412, HAVE A MINIMUM STIFFNESS OF 46 PSI AS DEFINED BY THE REQUIREMENTS OF ASTM D-3034.
 3. SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/4-INCH PER FOOT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 4. SEWER LATERALS SHALL HAVE A MINIMUM COVER OF 36-INCHES IN THE PUBLIC RIGHT-OF-WAY AND IN EASEMENTS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE DEFINITION OF "COVER" IS THE DISTANCE FROM THE TOP OF PIPE TO FINISHED GRADE.
 5. USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER MAIN CONSTRUCTION. WHEN A TAP SADDLE CONNECTION IS TO BE USED ON AN EXISTING SEWER MAIN, IT SHALL BE A WYE SADDLE AND BE INSTALLED PER DETAIL S-212C.
 6. SEWER LATERALS SHALL HAVE A CLEANOUT INSTALLED BETWEEN SIDEWALK AND RIGHT-OF-WAY. A G5 BOX CLEARLY MARKED "SEWER" SHALL BE INSTALLED OVER THE TOP OF THE CLEANOUT RISER CAP PIPE.
 7. SEWER LATERALS SHALL NOT BE CONNECTED DIRECTLY TO OR WITHIN 5- FEET OF A MANHOLE STRUCTURE.
 8. EXISTING SEWER LATERALS SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING. PLACE 6-INCH THICK CONCRETE PAD UNDER CONNECTION.
 9. SEWER LATERAL CONNECTION SHALL BE STABILIZED WITH APPROVED MATERIAL FOLLOWING INSTALLATION. CONNECTION TO CITY SEWER MAIN MUST BE INSPECTED BY THE CITY PRIOR TO BACKFILL.
 10. NO LATERAL CONNECTIONS SHALL BE MADE DIRECTLY TO A SANITARY SEWER "INTERCEPTOR" UNLESS APPROVED BY THE CITY ENGINEER.
 11. SEWER LATERALS SHALL NOT BE CONNECTED TO A SEWER MAIN UNLESS THE CONNECTION POINT IS BETWEEN TWO MANHOLE STRUCTURES.
 12. EACH INDIVIDUAL PARCEL SHALL HAVE A MINIMUM OF ONE SEWER LATERAL. TWO OR MORE PARCELS SHALL NOT SHARE ONE SEWER LATERAL.
 13. SANITARY SEWER LATERAL IDENTIFICATION AND LOCATING REQUIREMENTS SHALL BE PER SPARKS MUNICIPAL CODE 17.16.130 (SMC 17.16.130).
 14. DISCONTINUANCE OF USE OF AN EXISTING SEWER LATERAL REQUIRES ABANDONMENT OF THE LATERAL. CUT, REMOVE 1-FOOT OF EXISTING LATERAL AND CAP BOTH ENDS OF THE EXISTING SEWER LATERAL TO BE ABANDONED WITHIN 6-INCHES OF THE SEWER MAIN. ABANDONMENT MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
 15. PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION, MAINTENANCE AND REPAIR OF THE SEWER LATERAL WITHIN THE PUBLIC RIGHT-OF-WAY PER SPARKS MUNICIPAL CODE.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION DRAWING No. S-212B
 City of Sparks NOTES - SANITARY SEWER LATERAL APPROVED BY: JE DATE: 1/2020

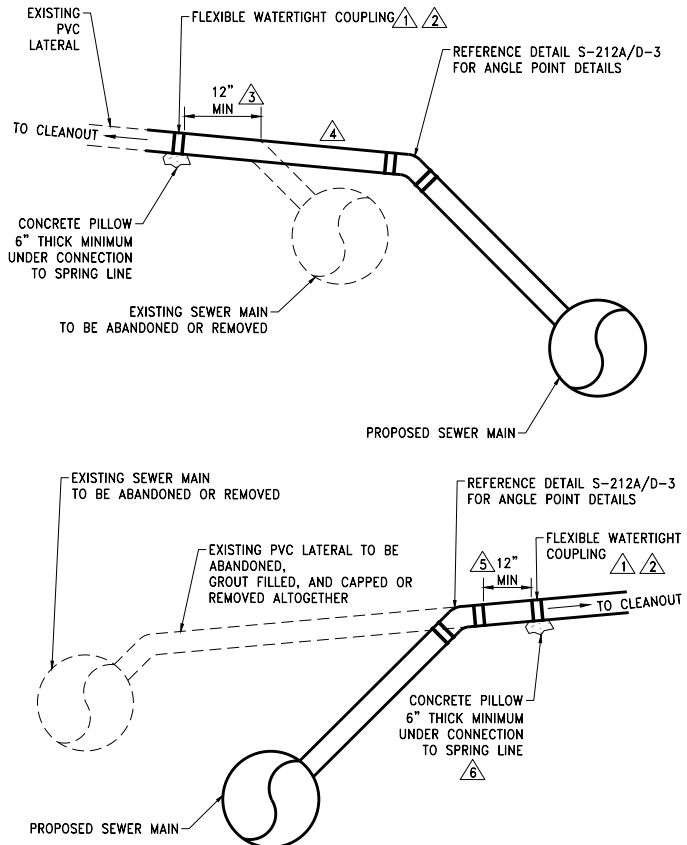


C203 LATERAL CLEANOUT DETAIL SCALE: NTS

- NOTES:
1. FLUSH PIPE W/ WATER TO LUBRICATE PRIOR TO GROUTING.
 2. VERIFY ALL EX. LATERALS ARE ABANDONED & CAPPED. (VIDEO.)
 3. GROUT WILL FLOW OUT OF VENT PIPE, GIVING VISUAL CONFIRMATION THAT MAINLINE IS FULL OF GROUT.
 4. CUT & BURY STAND PIPES MIN. 18" BELOW GRADE AFTER GROUTING IS COMPLETE.
 5. PREPARE MULTIPLE SECTIONS FOR GROUTING IN ADVANCE SO THAT PUMP TRUCK DOES NOT HAVE DOWN TIME BETWEEN SECTIONS.
 6. CONCRETE TRUCKS TO ARRIVE BEFORE PREVIOUS TRUCK EMPTIES. (SEE NOTE #5.)
 7. PUMP IN DIRECTION OF FLOW (DOWNSTREAM.)
 8. RECOMMEND SMALLER SECTIONS (<100') TO BE ABANDONED TO DECREASE LIKELIHOOD OF LOCKING UP BEFORE PIPE IS FULL OF GROUT. OVER 100'=COMMON LOCKUP. (THIS IS BASED ON PIPE DIAMETER, SLOPE AND OBSTRUCTIONS.)



C205 PIPE ABANDONMENT WITH GROUT SCALE: NTS



- NOTES:
1. RC5000 STRONG BACK COUPLING OR APPROVED EQUAL SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
 2. CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING PIPE AND PROVIDE PROPER FLEXIBLE WATERTIGHT COUPLINGS. IF CIPP IS ENCOUNTERED, EPOXY LINER AT END OF PIPE.
 3. CONTRACTOR TO CONNECT THE NEW LATERAL TO THE EXISTING LATERAL A MINIMUM OF 12" FROM THE ANGLE POINT OF THE EXISTING LATERAL.
 4. THE NEW LATERAL EXTENSION SHALL MAINTAIN SIMILAR SLOPE AS THE EXISTING LATERAL UNTIL THE ANGLE POINT TO THE NEW MAIN. ADJUSTMENTS MAY BE NECESSARY IF UTILITY CONFLICTS EXIST.
 5. CONTRACTOR SHALL EXTEND CONNECTION TO EXISTING LATERAL A MINIMUM OF 12" BEYOND THE NEW ANGLE POINT.
 6. CONCRETE PILLOW DOES NOT NEED TO BE PLACED IF A NEW LATERAL IS CONSTRUCTED ALL THE WAY BACK TO THE CLEANOUT.

C204 EXISTING PVC LATERAL EXTENSION AND CONNECTION TO NEW MAIN SCALE: NTS



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