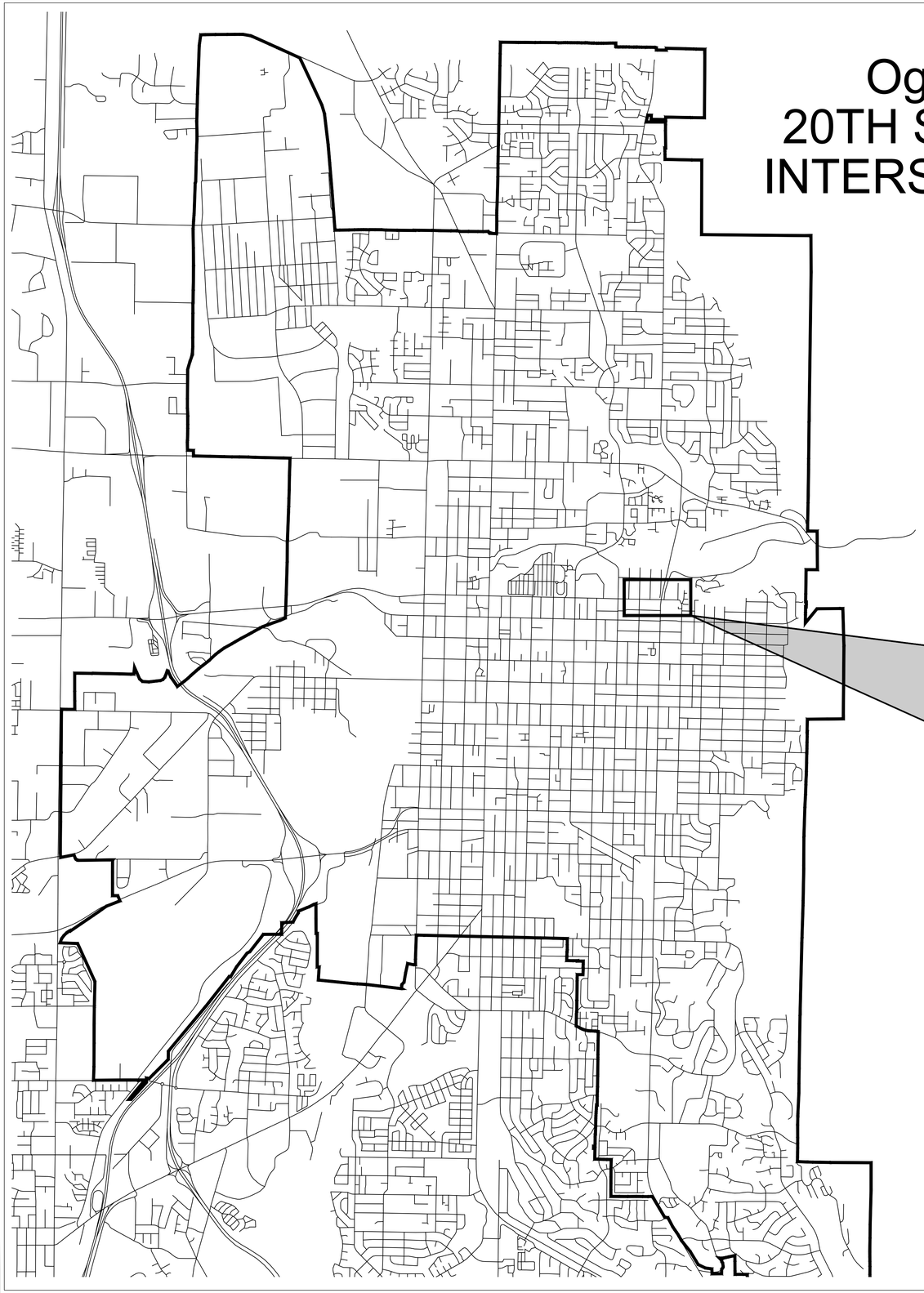
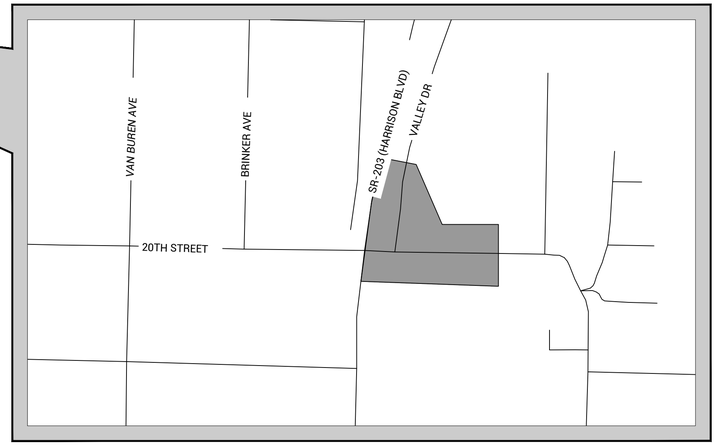
Ogden City Engineering
20TH STREET & VALLEY DRIVE INTERSECTION IMPROVEMENTS





Pg	TITLE	DESCRIPTION
1	G1	TITLE SHEET
2	SC1	SURVEY CONTROL
3	RMV1	REMOVALS
4	TS1	TYPICAL SECTIONS
5	RD1	ROADWAY
6	RD2	PROFILE
7-10	GD1-GD4	GRADING PLAN
11	ST1	SIGNING AND STRIPING
12-16	SD1-SD5	DRAINAGE PLAN
17	W1	WATER MAIN PLAN AND PROFILE
18-24	LT1-LT7	LIGHTING PLAN
25-30	DT1-DT6	DETAILS
31	ST1	WALL PLAN, ELEVATION AND SECTION
32-36	SG-01-SG-05	SIGNAL PLAN
37-39	LP1-LP3	LANDSCAPE PLAN
40-42	LP4-LP6	IRRIGATION PLAN

1

UDOT GENERAL NOTES

1. ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD (INCLUDING SUPPLEMENTAL) DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR IS TO OBTAIN AN ENCROACHMENT PERMIT FROM THE APPLICABLE UDOT REGION PERMIT OFFICE PRIOR TO COMMENCING WORK WITHIN UDOT RIGHT-OF-WAY. WORKING HOUR LIMITATIONS WILL BE LISTED IN THE LIMITATIONS SECTION OF THE ENCROACHMENT PERMIT.
3. UDOT RESERVES THE RIGHT, AT ITS OPTION, TO INSTALL A RAISED MEDIAN ISLAND OR RESTRICT THE ACCESS TO A RIGHT-IN OR RIGHT-OUT AT ANY TIME.
4. OWNER, DEVELOPER, AND CONTRACTOR ARE RESPONSIBLE FOR ANY DAMAGES DIRECTLY OR INDIRECTLY WITHIN THE UDOT RIGHT-OF-WAY AS A RESULT OF DEVELOPMENT ACTIVITIES.
5. OWNER, DEVELOPER, AND/OR CONTRACTOR IS REQUIRED TO HIRE AN INDEPENDENT COMPANY FOR ALL TESTING WITHIN THE UDOT RIGHT-OF-WAY.
6. ALL SIGNS INSTALLED ON THE UDOT RIGHT-OF-WAY MUST BE HIGH INTENSITY GRADE (TYPE XI SHEETING) WITH A B3 SLIP BASE. INSTALL ALL SIGNS PER UDOT SN SERIES STANDARD DRAWINGS.
7. COMPLY WITH THE REQUIREMENTS OF UTAH CODE 17-23-14 (DISTURBED CORNERS - COUNTY SURVEYOR TO BE NOTIFIED - COORDINATION WITH CERTAIN STATE AGENCIES).

G1

SHEET 1

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

TITLE SHEET

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:42 AM

DRAWING NAME: TITLE.dwg

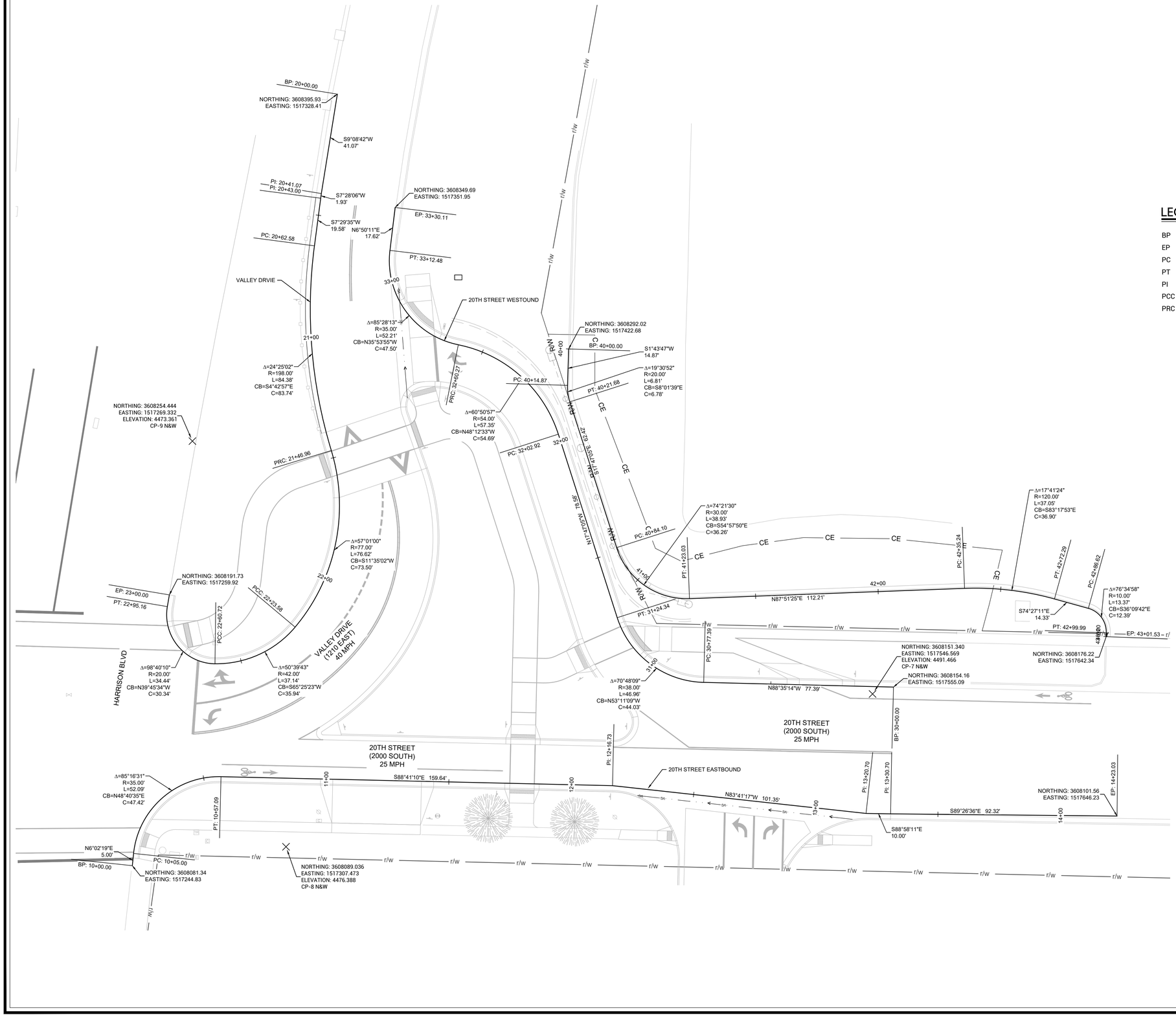
Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

SCALE

HORIZ 0 20 40

VERT 0 5 10



LEGEND

BP	BEGIN POINT	R	RADIUS
EP	END POINT	L	LENGTH
PC	POINT OF CURVATURE	CB	CORD BEARING
PT	POINT OF TANGENT	C	CORD LENGTH
PI	POINT OF INFLECTION	Δ	DELTA
PCC	POINT OF COMPOUND CURVE		
PRC	POINT OF REVERSE CURVE		

NOTES:

1. THE HORIZONTAL DATUM TO BE USED IS THE NAD 83 STATE PLANE UTAH NORTH ZONE GRID.
2. THE VERTICAL DATUM TO BE USED IS NAVD 88 USING GEOID 12A.

SC1

SHEET 2

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE

This bar measures exactly one inch on the original drawing

H: 1" = 20' (22x34) 1" = 40' (11x17)

V: 1" = 10' (22x34) 1" = 20' (11x17)

SURVEY CONTROL

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:43 AM

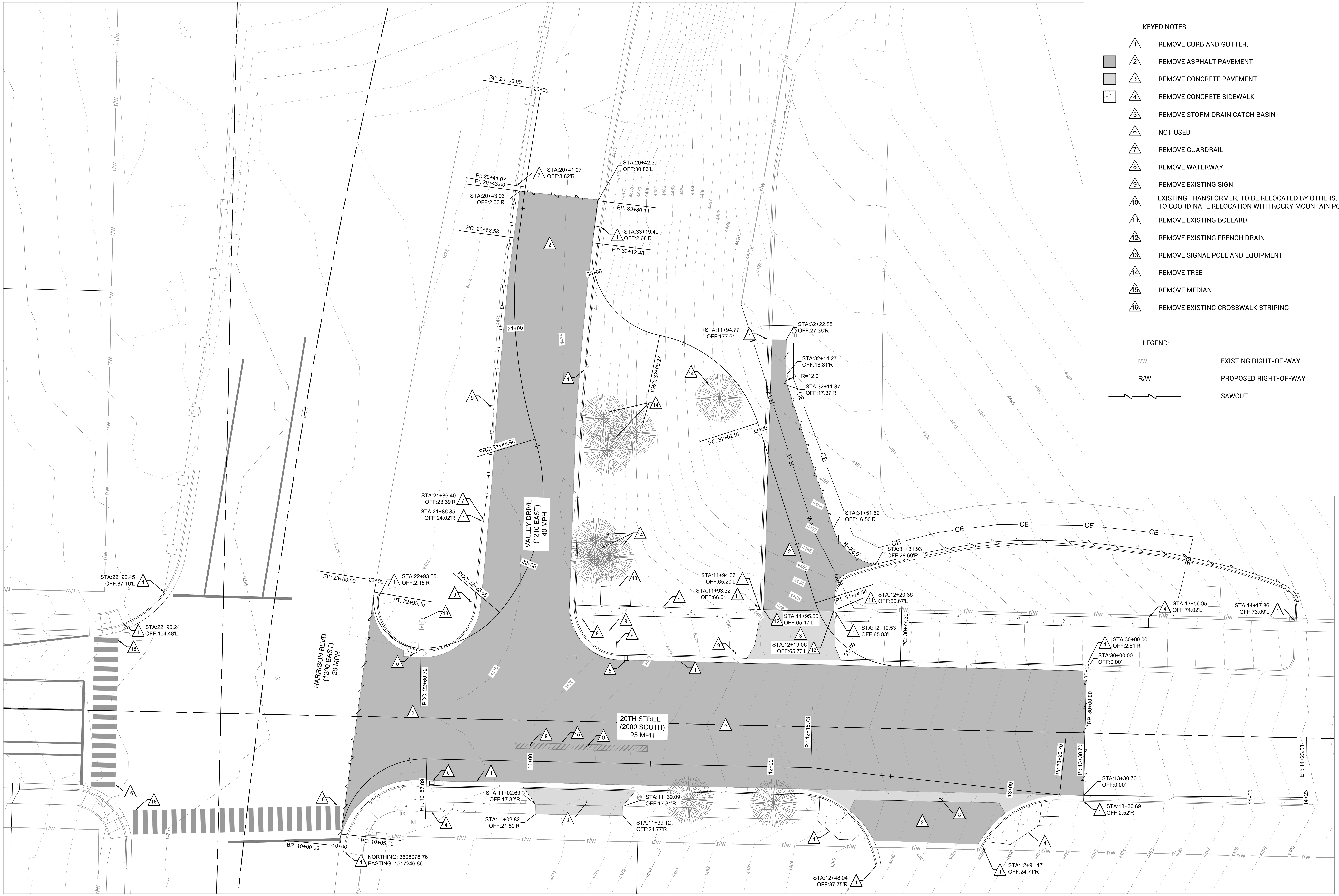
DRAWING NAME: HC.dwg

Kimley»Horn

111EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

SCALE

0 20 40



KEYED NOTES:

1. REMOVE CURB AND GUTTER.
2. REMOVE ASPHALT PAVEMENT
3. REMOVE CONCRETE PAVEMENT
4. REMOVE CONCRETE SIDEWALK
5. REMOVE STORM DRAIN CATCH BASIN
6. NOT USED
7. REMOVE GUARDRAIL
8. REMOVE WATERWAY
9. REMOVE EXISTING SIGN
10. EXISTING TRANSFORMER. TO BE RELOCATED BY OTHERS. CONTRACTOR TO COORDINATE RELOCATION WITH ROCKY MOUNTAIN POWER.
11. REMOVE EXISTING BOLLARD
12. REMOVE EXISTING FRENCH DRAIN
13. REMOVE SIGNAL POLE AND EQUIPMENT
14. REMOVE TREE
15. REMOVE MEDIAN
16. REMOVE EXISTING CROSSWALK STRIPING

LEGEND:

r/w	EXISTING RIGHT-OF-WAY
R/W	PROPOSED RIGHT-OF-WAY
	SAWCUT

RMV1

SHEET 3

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

This bar measures exactly one inch on the original drawing

REMOVALS

20TH STREET AND VALLEY DRIVE

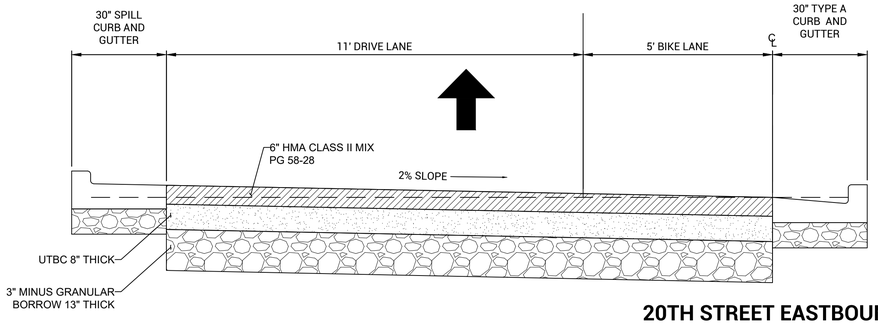
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:43 AM

DRAWING NAME: RMV.dwg

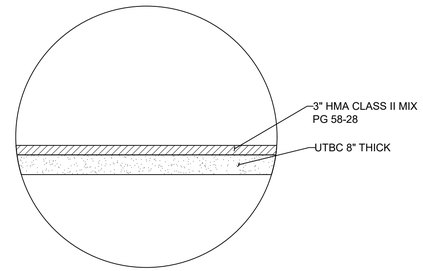
Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

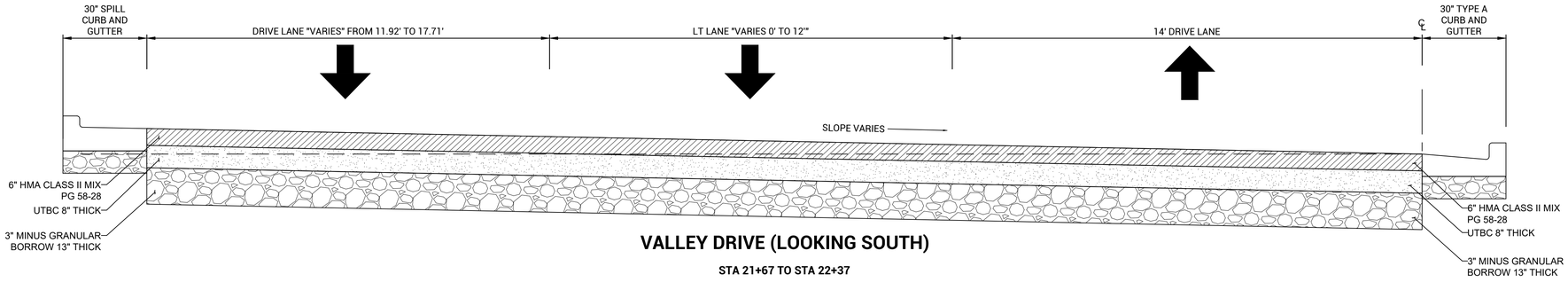


20TH STREET EASTBOUND

STA 12+17 TO STA 13+31

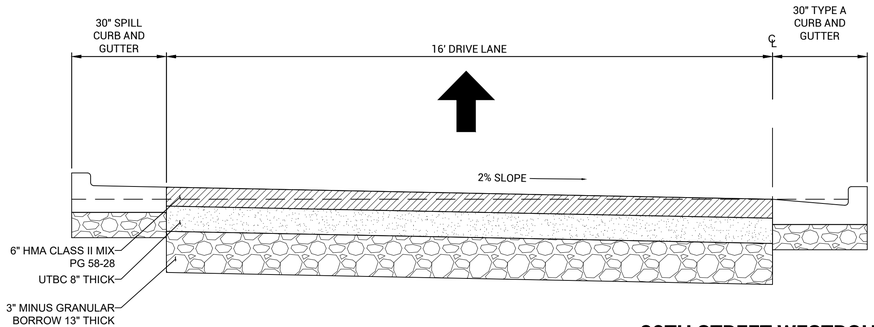


PARKING LOT PAVEMENT SECTION



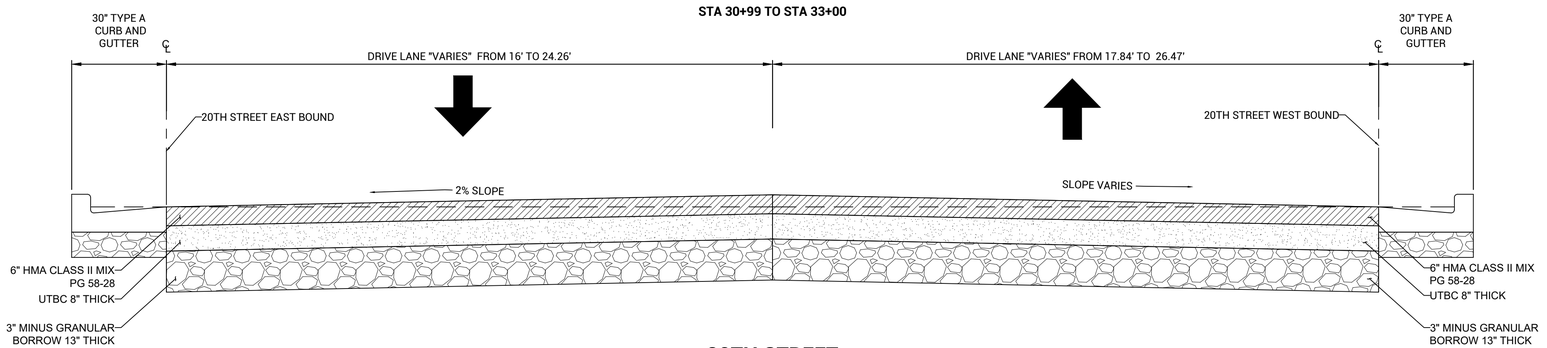
VALLEY DRIVE (LOOKING SOUTH)

STA 21+67 TO STA 22+37



20TH STREET WESTBOUND

STA 30+99 TO STA 33+00



20TH STREET

STA 30+00 TO STA 30+77

1

NOTES:

1. UDOT PAVEMENT SECTION:
   8" HMA (1/2 INCH) PER UDOT SPECIFICATION 02741
   6" UTBC PER UDOT SPECIFICATION 02721
   12" GRANULAR BORROW PER UDOT SPECIFICATION 02056

TS1

SHEET 4

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 2' (22x34) 1" = 4' (11x17)
V: NONE (22x34) NONE (11x17)

TYPICAL SECTIONS

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:43 AM

DRAWING NAME: TS.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

SUPERELEVATION TABLE	
STATION	SUPERELEVATION
11+13.69	1.51%
11+28.69	2.00%
13+00.70	2.00%
13+37.70	2.70%
20+43.00	-3.59%
22+42.04	2.77%

SCALE
0 20 40

GENERAL NOTES:

1. SPILL CURB: CONTRACTOR TO ROTATE GUTTER SLOPE TO 2% AT LIP OF GUTTER

KEYED NOTES:

	1	TYPE "A" CONCRETE CURB AND GUTTER PER OGDEN STANDARD. REFERENCE RD2 FOR ELEVATIONS.
	2	TYPE "A" CONCRETE SPILL CURB AND GUTTER PER OGDEN STANDARD
	3	TYPE "E" CONCRETE CURB AND GUTTER PER APWA STANDARD
	4	WATERWAY PER OGDEN STANDARD
	5	FLARED DRIVEWAY PER OGDEN STANDARD
	6	ASPHALT PAVEMENT PER TYPICAL SECTION ON SHEET TS1
	7	SIDEWALK PER OGDEN STANDARD. SEE PLAN FOR WIDTH
	8	LANDSCAPE. REFERENCE LANDSCAPE PLANS.
	9	MIDBLOCK RAMP PER APWA STANDARD DETAIL 8 ON SHEET DT1
	10	RAISED CROSSWALK PER DETAIL ON SHEET DT6
	11	PLOWABLE END SECTION PER DETAIL 4 ON SHEET DT1
	12	SOIL NAIL WALL. SEE STRUCTURAL PLANS
	13	PROPOSED MIDWEST GUARDRAIL SYSTEM
	14	EXISTING ELECTRIC TRANSFORMER. REFERENCE RMV SHEETS FOR RELOCATION BY OTHERS
	15	PROPOSED TRANSFORMER BY ROCKY MOUNTAIN POWER
	16	PROPOSED ADA RAMP. SEE SHEET DT5 OR DT6 FOR DETAIL
	17	PROPOSED DETECTABLE WARNING SURFACE (YELLOW)
	18	PROPOSED DETECTABLE WARNING SURFACE (GREY)
	19	VEHICLE PROTECTION SYSTEM LOAD BEARING
	20	VEHICLE PROTECTION SYSTEM GUIDE POST
	21	PROPOSED UTILITY STRUCTURE. REFER TO SHEET SD1
	22	PROPOSED BIKE RAMP. REFER TO DETAIL 19 ON SHEET DT4
	23	PROPOSED DETECTABLE WARNING SURFACE. REFER TO UDOT PA2
	24	UDOT ASPHALT PAVEMENT PER NOTE 1 ON SHEET TS1

RD1
SHEET 5
REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

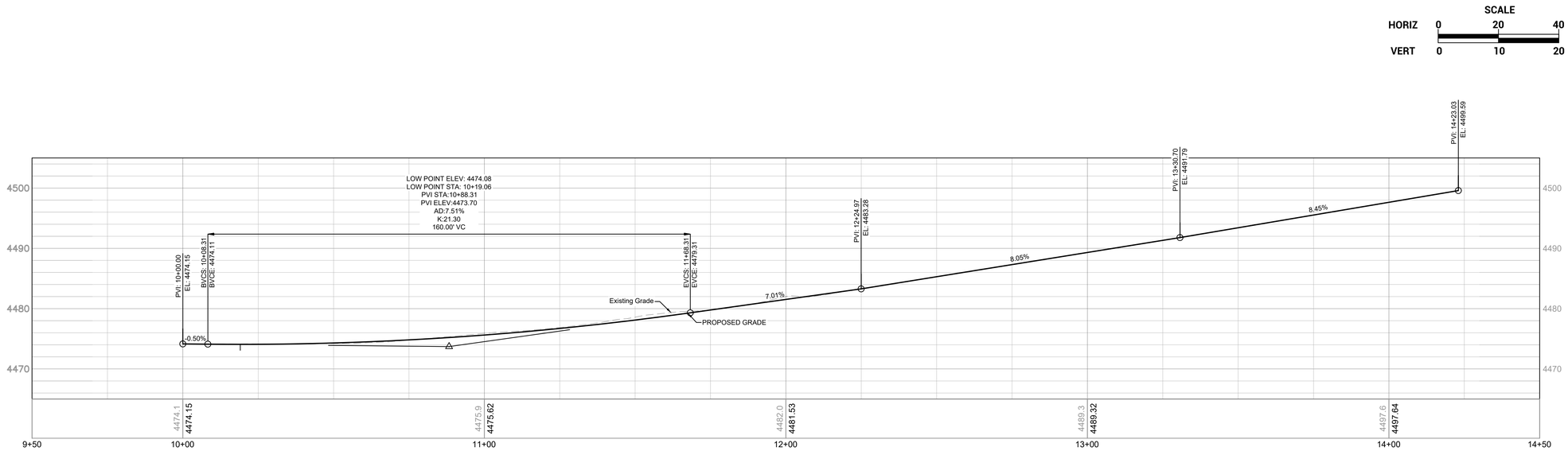
DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

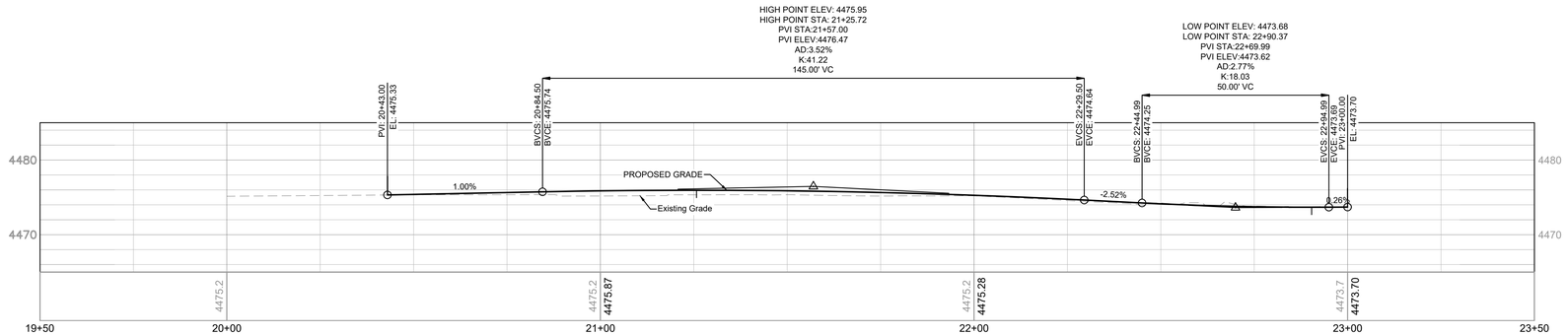
ROADWAY
20TH STREET AND VALLEY DRIVE
20TH STREET AND VALLEY DRIVE
PLOT DATE: 3/11/2025 11:43 AM
DRAWING NAME: RD Plan And Profile.dwg

Kimley»Horn

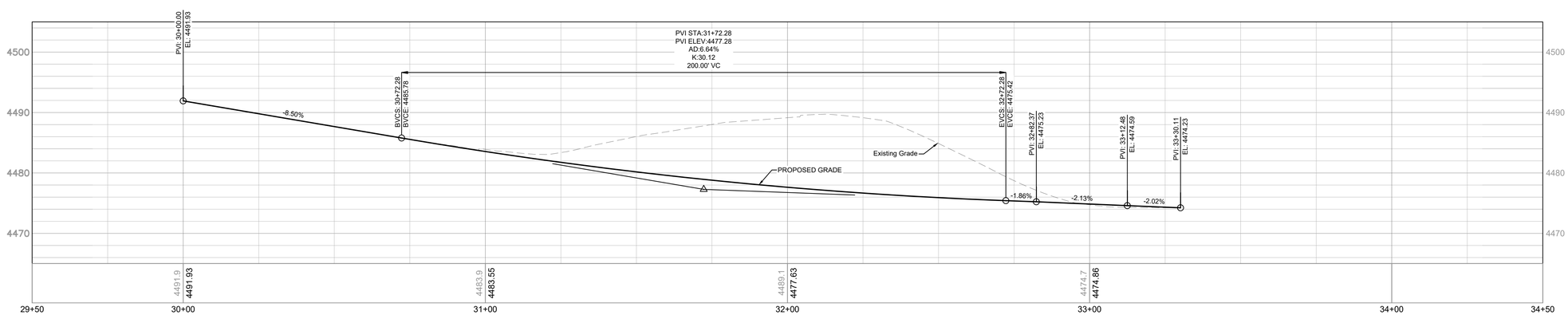
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



20TH STREET EAST BOUND CONTROL LINE PROFILE



VALLEY DRIVE CONTROL LINE PROFILE



20TH STREET WEST BOUND CONTROL LINE PROFILE

RD2

SHEET 6

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

PROFILE

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:43 AM

DRAWING NAME: RD Plan And Profile.dwg

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SALT LAKE CITY, UT 84111
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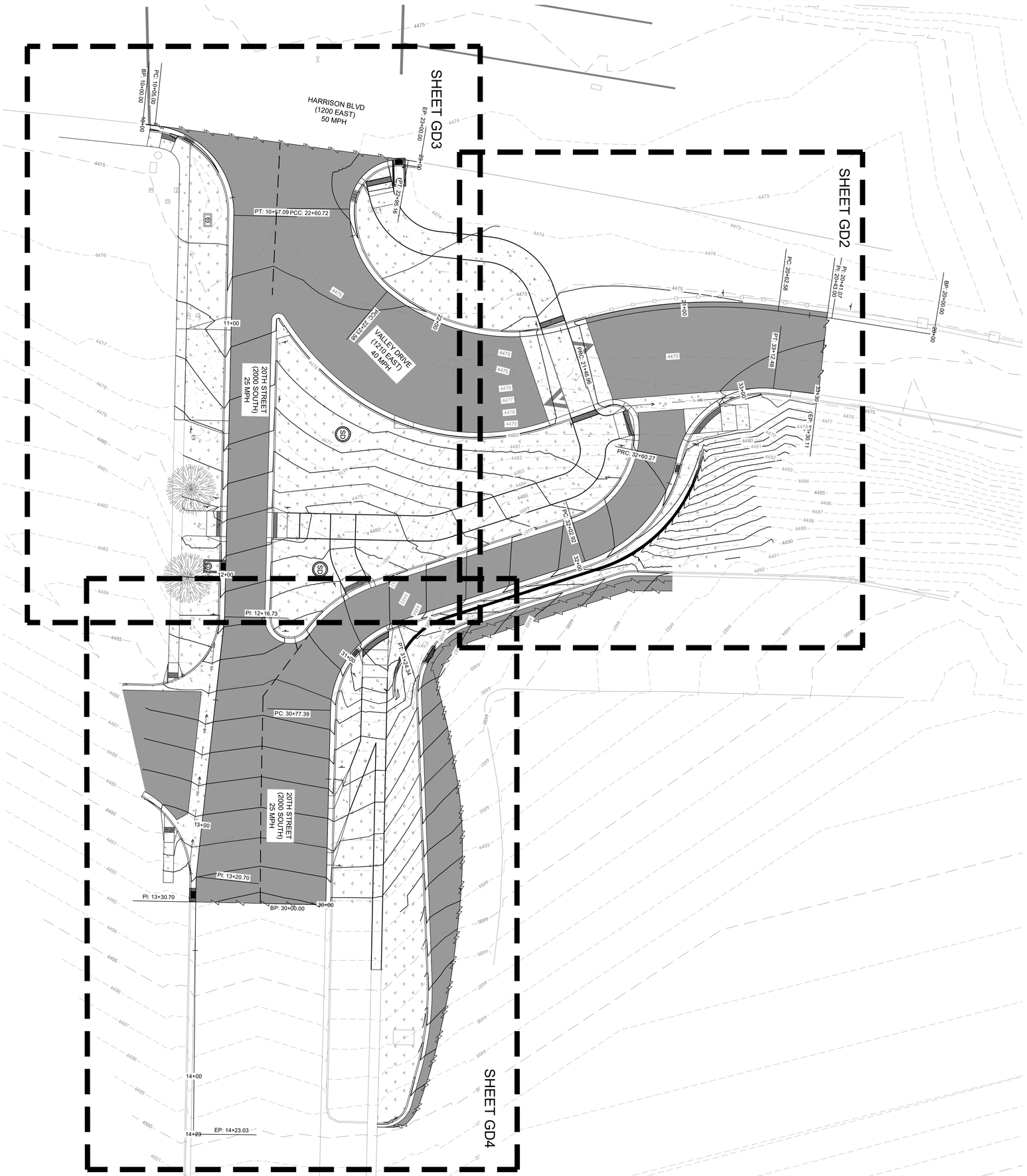
PHONE: 385-212-3176



LEGEND

TBC	TOP BACK OF CURB
ME	MATCH EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
LP	LOW POINT
BW	BOTTOM OF WALL
TW	TOP OF WALL
EOA	EDGE OF ASPHALT

SCALE 0 10 20

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SALT LAKE CITY, UT 84111
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PHONE: 385-212-3176

GRADING PLAN

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: GD.dwg

PLOT DATE: 3/11/2025 11:44 AM

DESIGNED	MSP	DATE
DRAWN	MSP	2/13/2025
CHECKED	DAT	

DRAWING SCALE

H: 1" = 20' (22x34) / 1" = 40' (11x17)

V: 1" = 10' (22x34) / 1" = 20' (11x17)

This bar measures exactly one inch on the original drawing.

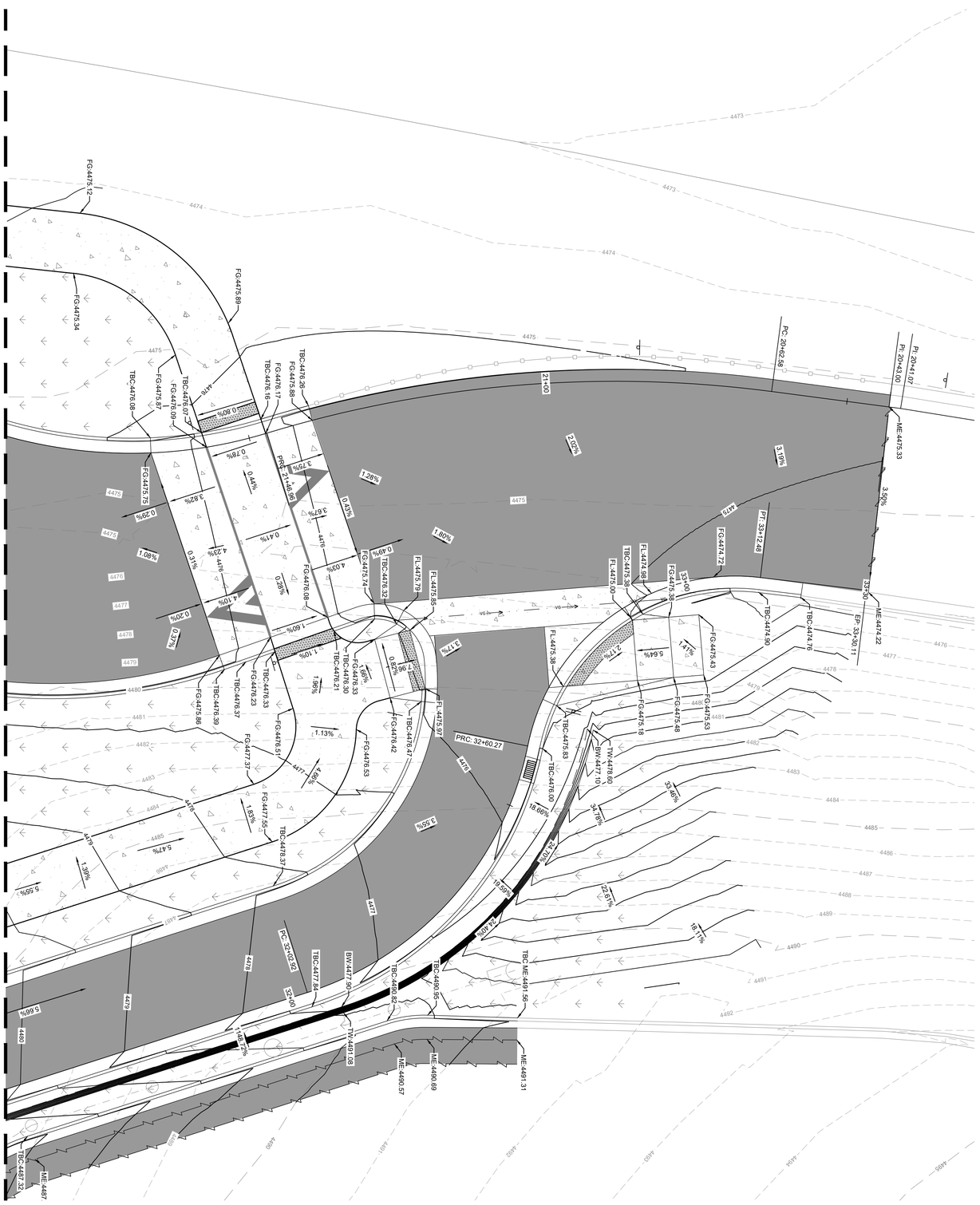
PROFESSIONAL ENGINEER — DAVID TUSLER — NO. 13909599-2202 — STATE OF UTAH — ELECTRONICALLY SIGNED AND SEALED

REV	DATE	DESCRIPTION

GD1

SHEET 7

0 REVISION



SCALE
0
10
20

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SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

GRADING PLAN

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: GD.dwg

PLOT DATE: 3/11/2025 11:44 AM

DESIGNED	MSP	DATE
DRAWN	MSP	2/13/2025
CHECKED	DAT	

DRAWING SCALE

H: 1" = 10' (22x34) / 1" = 20' (11x17)

V: None (22x34) / None (11x17)

This bar measures exactly one inch on the original drawing

STATE OF UTAH — PROFESSIONAL ENGINEER — NO. 13696999-2202 — DAVID TUSLER — ELECTRONICALLY SIGNED

REV	DATE	DESCRIPTION

GD2

SHEET 8

0 REVISION

SCALE
0
10
20

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SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

GRADING PLAN

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: GD.dwg

PLOT DATE: 3/11/2025 11:44 AM

DESIGNED	MSP	DATE
DRAWN	MSP	2/13/2025
CHECKED	DAT	

DRAWING SCALE

H: 1" = 10' (22x34)
1" = 20' (11x17)

V: None (22x34)
None (11x17)

This bar measures exactly one inch on the original drawing.

PROFESSIONAL ENGINEER
STATE OF UTAH
NO. 13909599-2202
DAVID TUSLER
ELECTRONICALLY SIGNED

REV	DATE	DESCRIPTION

GD3

SHEET 9

0 REVISION

MATCH LINE SEE GD3

SCALE
0
10
20

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SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

GRADING PLAN

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: GD.dwg

PLOT DATE: 3/11/2025 11:44 AM

DESIGNED	MSP	DATE
DRAWN	MSP	2/13/2025
CHECKED	DAT	

DRAWING SCALE

H: 1" = 10' (22x34)
1" = 20' (11x17)

V: None (22x34)
None (11x17)

This bar measures exactly one inch on the original drawing

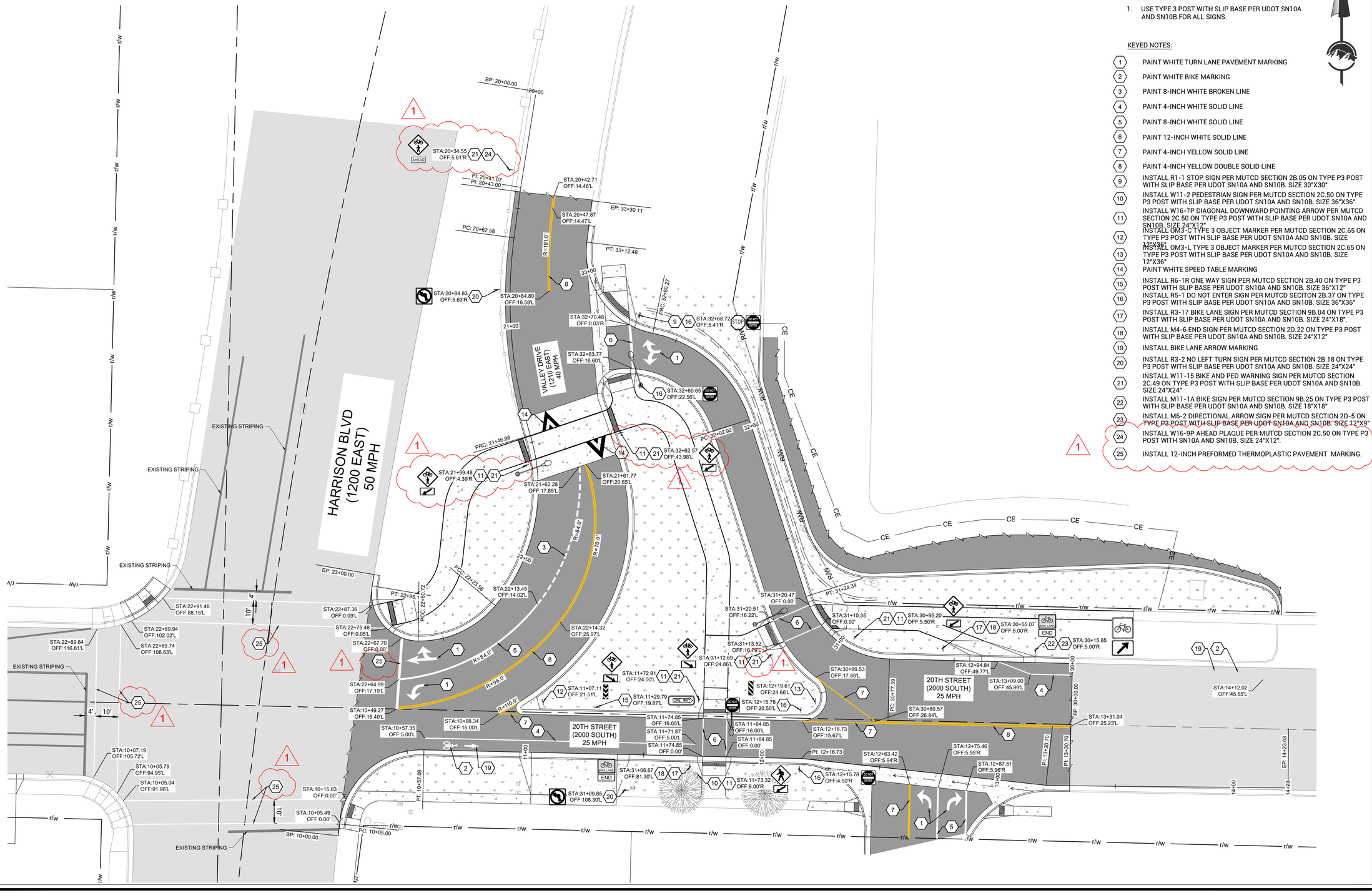
UTAH LICENSED PROFESSIONAL ENGINEER
DAVID TUSLER
NO. 13809899-2202
ELECTRONICALLY SIGNED

REV	DATE	DESCRIPTION

GD4

SHEET 10

0 REVISION



SCALE

0 20 40

GENERAL NOTES:

1. USE TYPE 3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B FOR ALL SIGNS.

KEYED NOTES:

1. PAINT WHITE TURN LANE PAVEMENT MARKING
2. PAINT WHITE BIKE MARKING
3. PAINT 8-INCH WHITE BROKEN LINE
4. PAINT 4-INCH WHITE SOLID LINE
5. PAINT 8-INCH WHITE SOLID LINE
6. PAINT 12-INCH WHITE SOLID LINE
7. PAINT 4-INCH YELLOW SOLID LINE
8. PAINT 4-INCH YELLOW DOUBLE SOLID LINE
9. INSTALL R1-1 STOP SIGN PER MUTCD SECTION 2B.05 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 30"X30"
10. INSTALL W11-2 PEDESTRIAN SIGN PER MUTCD SECTION 2C.50 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 36"X36"
11. INSTALL W16-7P DIAGONAL DOWNWARD POINTING ARROW PER MUTCD SECTION 2C.50 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 24"X12"
12. INSTALL OM3-C TYPE 3 OBJECT MARKER PER MUTCD SECTION 2C.65 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 12"X36"
13. INSTALL OM3-L TYPE 3 OBJECT MARKER PER MUTCD SECTION 2C.65 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 12"X36"
14. PAINT WHITE SPEED TABLE MARKING
15. INSTALL R6-1R ONE WAY SIGN PER MUTCD SECTION 2B.40 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 36"X12"
16. INSTALL R5-1 DO NOT ENTER SIGN PER MUTCD SECITON 2B.37 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 36"X36"
17. INSTALL R3-17 BIKE LANE SIGN PER MUTCD SECTION 9B.04 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 24"X18".
18. INSTALL M4-6 END SIGN PER MUTCD SECTION 2D.22 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 24"X12"
19. INSTALL BIKE LANE ARROW MARKING
20. INSTALL R3-2 NO LEFT TURN SIGN PER MUTCD SECTION 2B.18 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 24"X24"
21. INSTALL W11-15 BIKE AND PED WARNING SIGN PER MUTCD SECTION 2C.49 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 24"X24"
22. INSTALL M11-1A BIKE SIGN PER MUTCD SECTION 9B.25 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 18"X18"
23. INSTALL M6-2 DIRECTIONAL ARROW SIGN PER MUTCD SECTION 2D-5 ON TYPE P3 POST WITH SLIP BASE PER UDOT SN10A AND SN10B. SIZE 12"X9"
24. INSTALL W16-9P AHEAD PLAQUE PER MUTCD SECTION 2C.50 ON TYPE P3 POST WITH SN10A AND SN10B. SIZE 24"X12".
25. INSTALL 12-INCH PREFORMED THERMOPLASTIC PAVEMENT MARKING.

ST1

SHEET 11

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

SIGNING AND STRIPING

20TH STREET AND VALLEY DRIVE

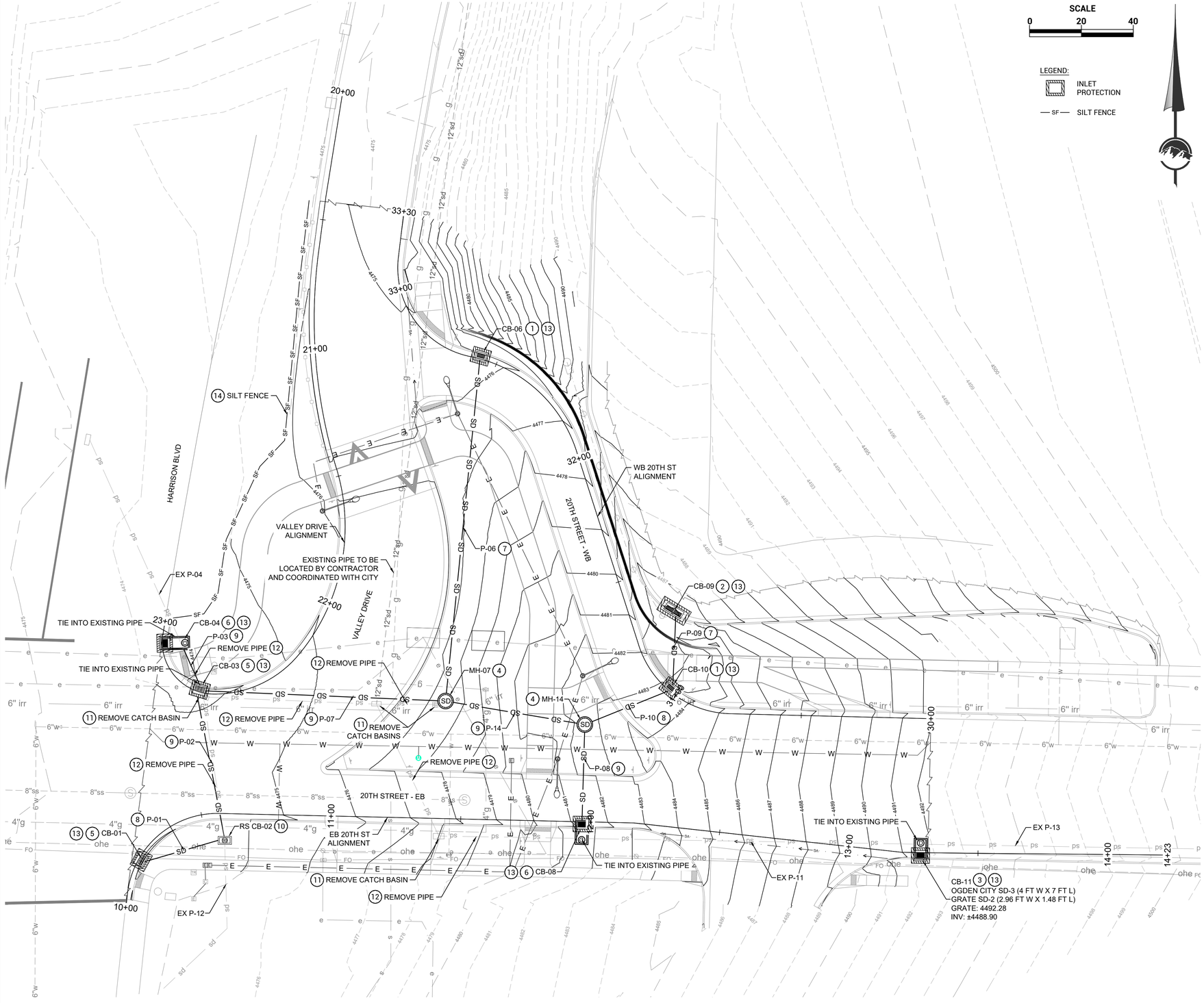
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:44 AM

DRAWING NAME: SS Plan.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-1176



1. CATCH BASIN WITH CURB INLET PER STANDARD PLAN SD-1 IN OGDEN CITY'S ENGINEERING STANDARDS FOR PUBLIC IMPROVEMENTS (2025)
   WB 20TH ST
   [CB-06] 32+56.53 RT 1.83
   [CB-10] 31+03.30 RT 1.83

2. DOUBLE CATCH BASIN WITH CURB INLET PER STANDARD PLAN SD-1 IN OGDEN CITY'S ENGINEERING STANDARDS FOR PUBLIC IMPROVEMENTS (2025)
   WB 20TH ST
   [CB-09] 31+32.40 RT 16.34

3. COMBINATION INLET/CLEANOUT BOX PER STANDARD PLAN SD-3 IN OGDEN CITY'S ENGINEERING STANDARDS FOR PUBLIC IMPROVEMENTS (2025)
   EB 20TH ST
   [CB-11] 13+27.86 RT 1.82

4. 5' PRECAST STORM DRAIN MANHOLE PER STANDARD PLAN SD-4 IN OGDEN CITY'S ENGINEERING STANDARDS FOR PUBLIC IMPROVEMENTS (2025)
   EB 20TH ST
   [MH-07] 11+43.12 LT 45.32
   [MH-14] 11+96.99 LT 37.48

5. CATCH BASIN AND CLEANOUT BOX PER STANDARD PLAN CB 9 WITH GF 1 BS IN UDOT STANDARD DRAWINGS (2025), SEE DETAIL SHEET SD5
   EB 20TH ST
   [CB-01] 10+19.82 RT 1.83, COL A
   [CB-03] 10+53.50 LT 48.90, COL B

6. MODIFIED COMBINATION INLET/CLEANOUT BOX, SEE DETAIL SHEET SD3
   EB 20TH ST
   [CB-04] 10+51.41 LT 66.65
   [CB-08] 11+96.76 RT 6.96

7. 15" REINFORCED CONCRETE PIPE
   [P-06] WB 20TH ST 32+56.53 RT 1.83 (CB-06) TO
   EB 20TH ST 11+43.12 LT 45.32 (MH-07) [134 LF CLASS III]
   [P-09] WB 20TH ST 31+32.40 RT 16.34 (CB-09) TO
   WB 20TH ST 31+03.30 RT 1.83 (CB-10) [29 LF CLASS III]

8. 18" REINFORCED CONCRETE PIPE
   [P-01] EB 20TH ST 10+19.82 RT 1.83 (CB-01) TO
   EB 20TH ST 10+59.25 RT 10.33 (RS CB-02) [32 LF CLASS IV]
   [P-10] WB 20TH ST 31+03.30 RT 1.83 (CB-10) TO
   EB 20TH ST 11+96.99 LT 37.48 (MH-14) [37 LF CLASS III]

9. 24" REINFORCED CONCRETE PIPE
   [P-02] EB 20TH ST 10+59.25 RT 10.33 (RS CB-02) TO
   EB 20TH ST 10+53.50 LT 48.90 (CB-03) [60 LF CLASS IV]
   [P-03] EB 20TH ST 10+53.50 LT 48.90 (CB-03) TO
   EB 20TH ST 10+51.41 LT 66.65 (CB-04) [19 LF CLASS IV]
   [P-07] EB 20TH ST 11+43.12 LT 45.32 (MH-07) TO
   EB 20TH ST 10+53.50 LT 48.90 (CB-03) [95 LF CLASS IV]
   [P-08] EB 20TH ST 11+96.76 RT 6.96 (CB-08) TO
   EB 20TH ST 11+96.99 LT 37.48 (MH-14) [39 LF CLASS III]
   [P-14] EB 20TH ST 11+96.99 LT 37.48 (MH-14) TO
   EB 20TH ST 11+43.12 LT 45.32 (MH-07) [54 LF CLASS III]

10. RECONSTRUCT CATCH BASIN WITH OGDEN CITY STORM DRAIN MANHOLE LID AND FRAME (SD-5)
    EB 20TH ST
    [RS CB-02] 10+59.25 RT 10.33

11. REMOVE CATCH BASIN
    EB 20TH ST
    10+53.91 LT 45.06
    11+16.53 LT 43.51
    11+39.04 LT 43.89
    11+41.72 RT 6.77

12. REMOVE PIPE
    EB 20TH ST
    10+59.25 RT 10.33 TO 10+53.91 LT 45.06 [56 LF]
    10+53.91 LT 45.06 TO 10+51.41 LT 66.65 [24 LF]
    11+16.53 LT 43.51 TO 10+53.91 LT 45.06 [67 LF]
    11+39.04 LT 43.89 TO 11+16.53 LT 43.51 [23 LF]
    11+41.72 RT 6.77 TO 11+16.53 LT 43.51 [56 LF]
    11+96.75 RT 6.44 TO 11+41.72 RT 6.77 [55 LF]

13. GUTTER INLET PROTECTION
    EB 20TH ST
    [CB-01] 10+19.82 RT 1.83
    [CB-03] 10+53.50 LT 48.90
    [CB-04] 10+51.41 LT 66.65
    [CB-08] 11+96.76 RT 6.96
    [CB-11] 13+27.86 RT 1.82

    WB 20TH ST
    [CB-06] 32+56.53 RT 1.83
    [CB-09] 31+32.40 RT 16.34
    [CB-10] 31+03.30 RT 1.83

14. SILT FENCE
    EB 20TH ST
    10+50.90 LT 76.66 TO 10+86.12 LT 237.04 [181 LF]

NOTES:
1) UTILITY LOCATIONS ARE APPROXIMATE AND BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO EXCAVATION.
2) CONTRACTOR TO COORDINATE WITH CITY AND LOOP EXISTING SERVICE LATERALS (GAS, COMM, WATER, ETC.) AS NEEDED FOR CONSTRUCTION. PROTECT IN PLACE ALL OTHER UTILITIES AND EXISTING DRAINAGE FEATURES NOT BEING RELOCATED UNLESS OTHERWISE NOTED.
3) PROFILES AND CROSS-SECTIONS ARE PROVIDED FOR INFORMATION ONLY TO ASSIST IN PIPE INSTALLATION.
4) MAINTAIN AND KEEP STORM DRAINAGE FEATURES OPERATIONAL AS NEEDED TO CONVEY DRAINAGE DURING CONSTRUCTION.
5) UNLESS OTHERWISE STATED, ALL STORM INFRASTRUCTURE IS TO CONFORM WITH OGDEN CITY STANDARDS AND SPECIFICATIONS.
6) CATCH BASIN AND COMBINATION BOX SIZES ARE BASED ON INSIDE STRUCTURE DIMENSIONS.

SD1

SHEET 12

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED JMP
DRAWN JEB
CHECKED DWT
DATE 2/13/2025

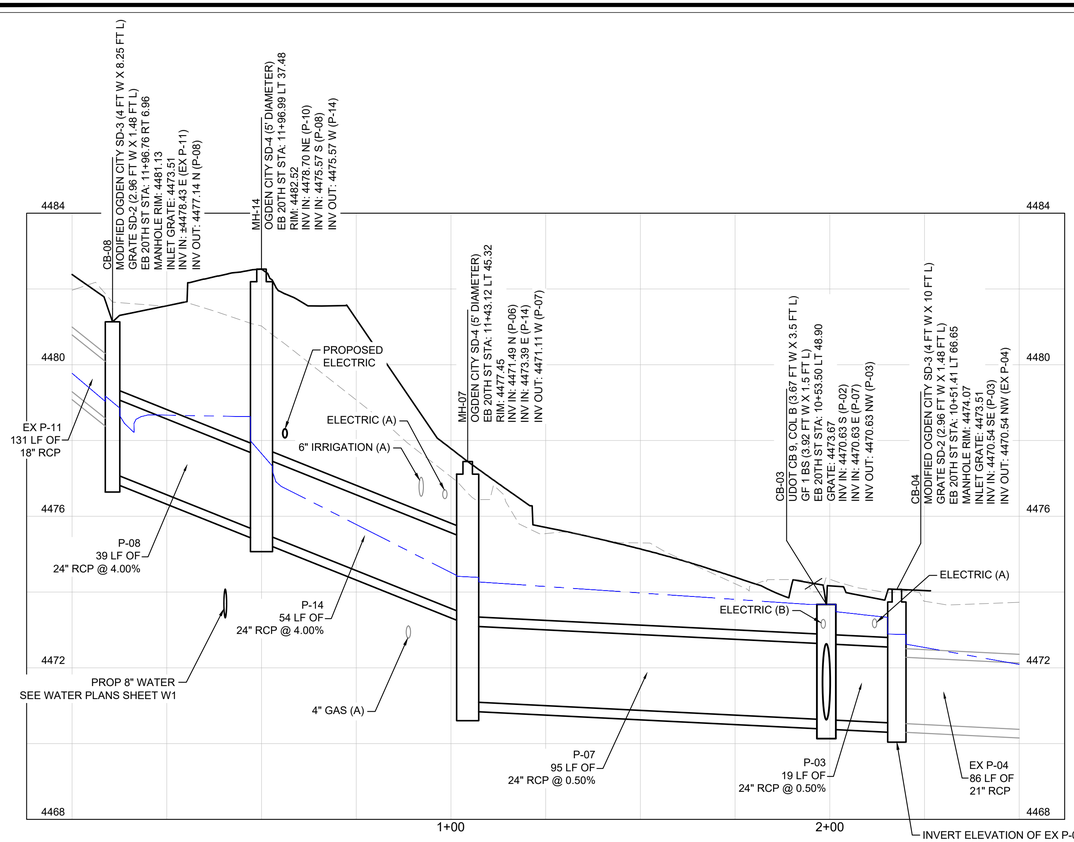
DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

DRAINAGE PLAN
20TH STREET AND VALLEY DRIVE
20TH STREET AND VALLEY DRIVE

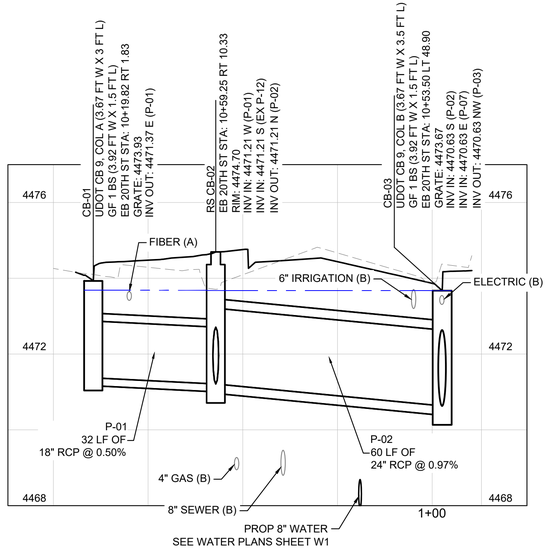
PLOT DATE: 3/11/2025 11:44 AM
DRAWING NAME: UT-SD.dwg

Kimley»Horn

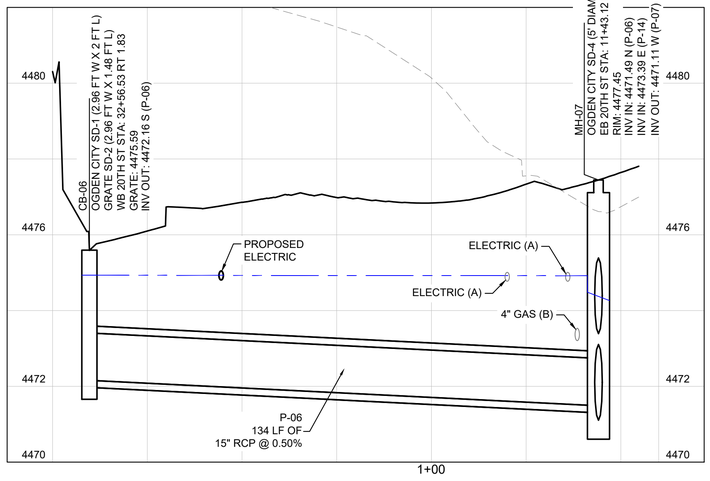
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



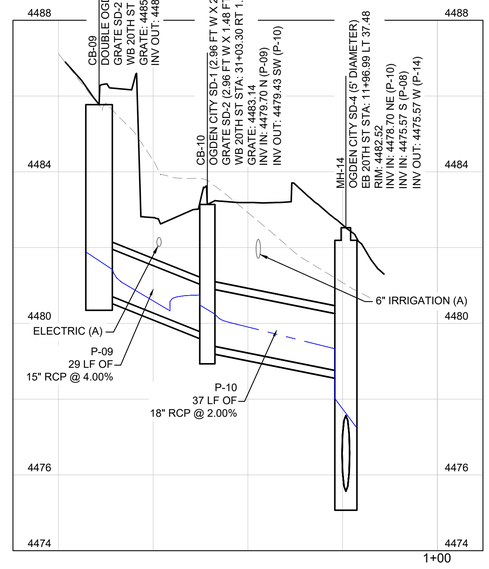
CB-08 TO CB-04



CB-01 TO CB-03



CB-06 TO MH-07



CB-09 TO MH-14

SCALE

HORIZ	0	20	40
VERT	0	2	4

LEGEND:

- EXISTING SURFACE
- PROPOSED SURFACE
- 10-YEAR HGL

PROFILE NOTES:

(A) SURVEYED UTILITY, ELEVATION UNKNOWN, PROTECT IN PLACE. CONTRACTOR TO VERIFY

(B) ELEVATION REQUESTED WITH TEST HOLE

SD2

SHEET 13

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED JMP
DRAWN JEB
CHECKED DWT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 2' (22x34) 1" = 4' (11x17)
This bar measures exactly one inch on the original drawing

DRAINAGE PROFILE

20TH STREET AND VALLEY DRIVE

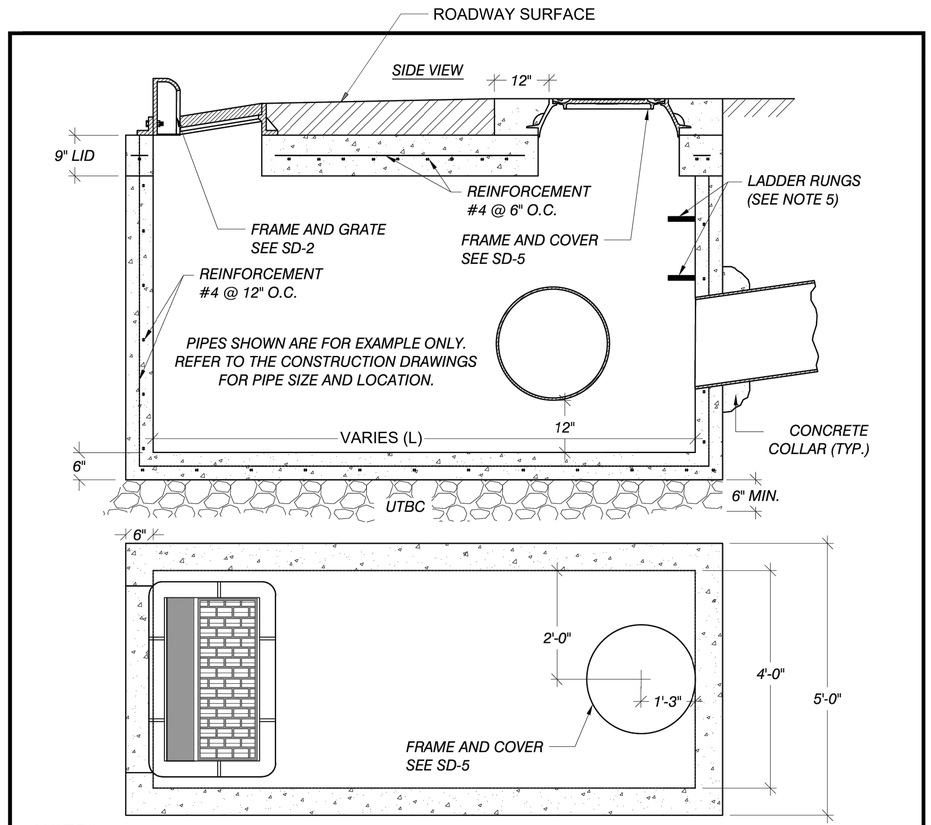
20TH STREET AND VALLEY DRIVE

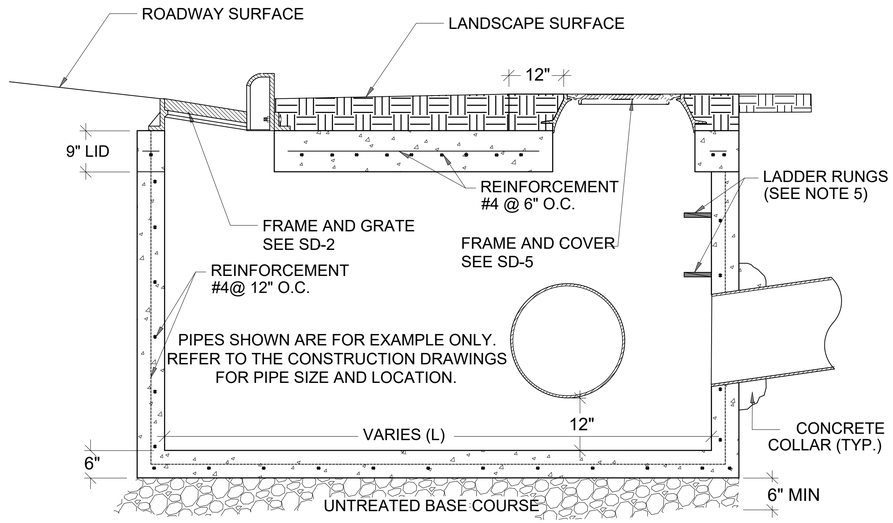
PLOT DATE: 3/11/2025 11:45 AM

DRAWING NAME: UT-SD.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176





MODIFIED SECTION VIEW

COMBINATION INLET/CLEANOUT BOX TABLE		
STRUCTURE ID	TYPE	INSIDE LENGTH (L)
CB-04	MODIFIED	10-FT
CB-08	MODIFIED	8.25-FT
CB-11	STANDARD	7-FT

NOTES:

1. COMPACT BACKFILL AND BASE COURSE PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING AND 6" WHEN USING HAND COMPACTION EQUIPMENT.
   1.1. BACKFILL: PROVIDE AND PLACE PER APWA SECTION 31 23 23 ON ALL SIDES OF THE BASIN.
   1.2. UNTREATED BASE COURSE: PROVIDE MATERIAL PER APWA SECTION 32 11 23. PLACE MATERIAL PER APWA SECTION 31 23 23.
2. REINFORCEMENT SHALL BE PER ASTM A 615, GRADE 60, DEFORMED STEEL. SEE APWA SECTION 03 20 00.
3. CONCRETE SHALL BE CLASS 4000 PER APWA SECTION 03 30 04. PLACE CONCRETE PER APWA SECTION 03 30 10. CURE PER APWA SECTION 03 39 00. PRECAST BOXES ARE ACCEPTABLE.
4. CURB FACE OPENING: OPENING SHALL BE AT LEAST 6" WIDE. PROVIDE A 2" DROP BETWEEN THE 'BEGIN WARP' LINE IN THE GUTTER AND THE TOP OF THE GRATE AT THE CURB OPENING.
5. LADDER RUNGS ARE REQUIRED IN ALL BOXES. SEE SS-6 FOR TYPICAL STEP REQUIREMENTS.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH "Still Untamed"	COMBINATION INLET / CLEANOUT BOX	SD-3
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

SD3

SHEET 14 — REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — NO. 13656699-2202 — DAVID TUSLER — 3/11/2025 — ELECTRONIC SEAL — STATE OF UTAH

DESIGNED ▶ JMP
DRAWN ▶ JEB
CHECKED ▶ DWT
DATE 2/13/2025

DRAWING SCALE
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H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

DRAINAGE DETAILS

20TH STREET AND VALLEY DRIVE

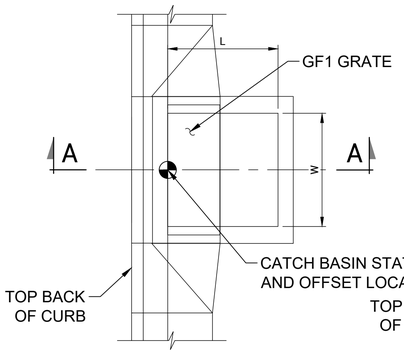
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

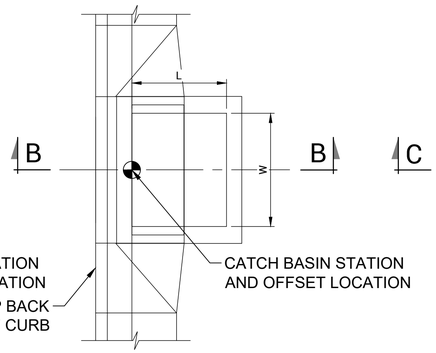
DRAWING NAME: UT-SD_DT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



PLAN



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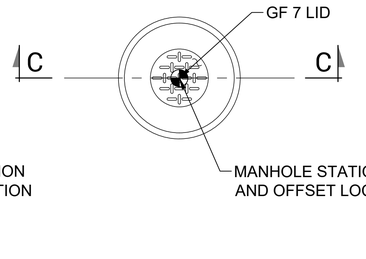

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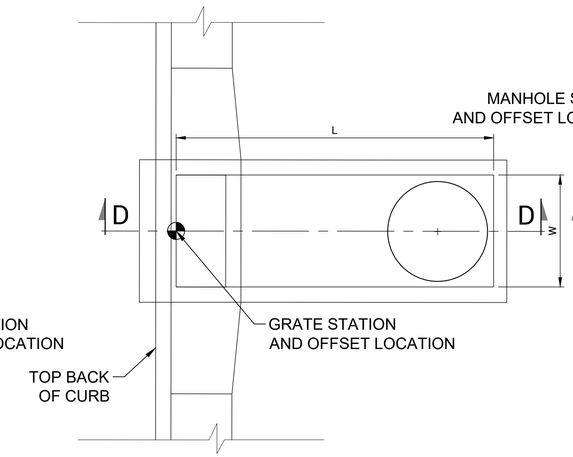

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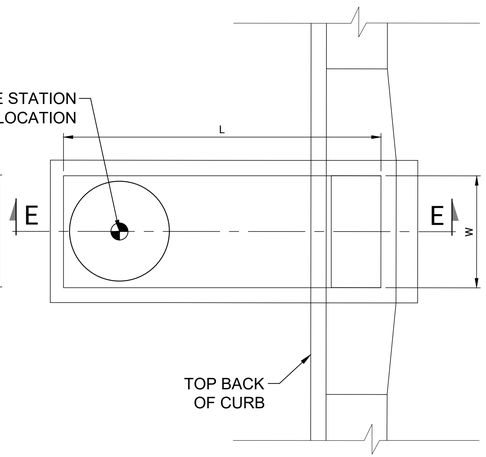

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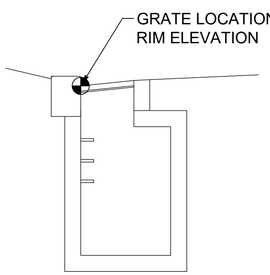
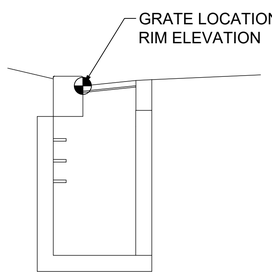


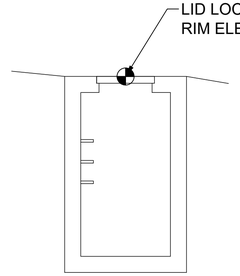
SECTION A-A

UDOT CB 9



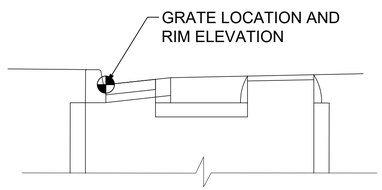
SECTION B-B

OGDEN CITY SD-1



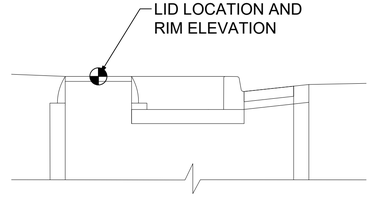
SECTION C-C

STORM DRAIN
MANHOLE



SECTION D-D

STANDARD COMBINATION
INLET/CLEANOUT BOX



SECTION E-E

MODIFIED COMBINATION
INLET/CLEANOUT BOX

SD4

SHEET 15

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID
TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED JMP
DRAWN JEB
CHECKED DWT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

DRAINAGE DETAILS

20TH STREET AND VALLEY DRIVE

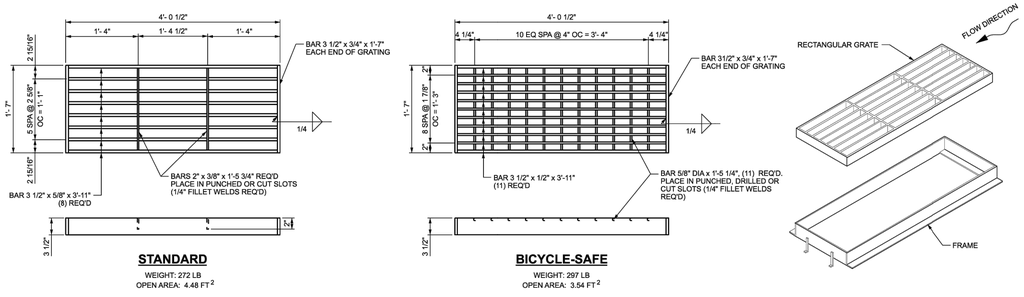
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

DRAWING NAME: UT-SD_DT.dwg

Kimley»Horn

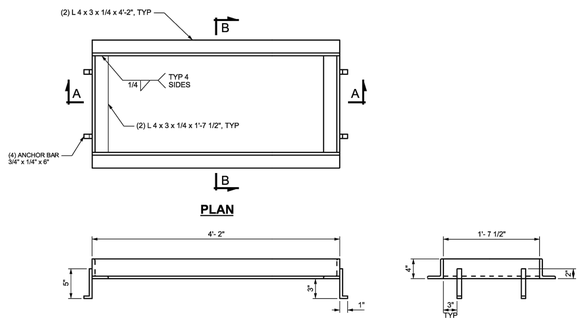
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



STANDARD
WEIGHT: 272 LB
OPEN AREA: 4.48 FT^2

BICYCLE-SAFE
WEIGHT: 297 LB
OPEN AREA: 3.54 FT^2

RECTANGULAR GRATE



PLAN

SECTION A-A

SECTION B-B

FRAME
WEIGHT: 68 LB

DESIGN DATA
HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN AND INTERIM SPECIFICATIONS.

STRUCTURAL STEEL: Fy = 36,000 psi

NOTES
1. FURNISH RECTANGULAR GRATE AND FRAME IN STRUCTURAL STEEL.
2. WELD ALL JOINTS WITH A 1/4 INCH FILLET WELD UNLESS NOTED OTHERWISE.

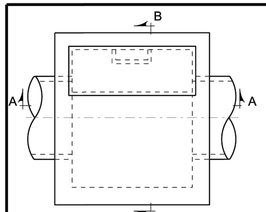
REVISIONS

NO	DATE	BY	REMARKS

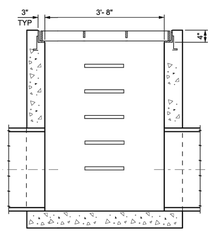
UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH
STANDARD DRAWING EDITION
2025 Standard Drawing

RECTANGULAR GRATE AND FRAME
STANDARD DRAWING TITLE

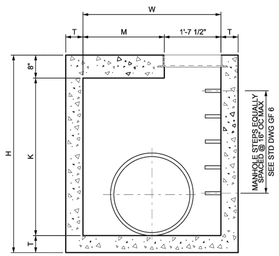
STD. DWG. NO.
GF 1



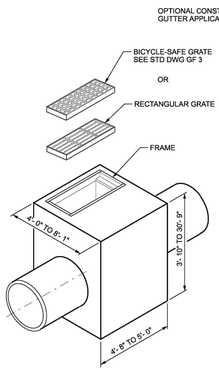
PLAN



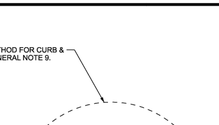
SECTION A-A

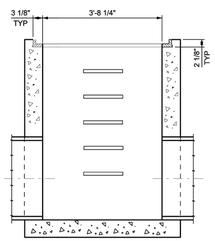


SECTION B-B

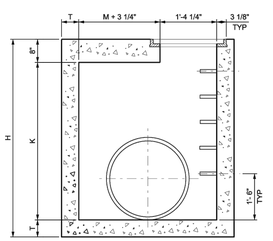


CATCH BASIN
GRATE AND FRAME APPLICATION

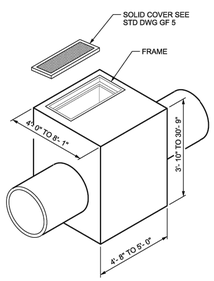




SECTION A-A



SECTION B-B



CLEANOUT BOX
SOLID COVER APPLICATION

DESIGN DATA
HL-93 IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN AND INTERIM SPECIFICATIONS

STRUCTURAL STEEL: Fy = 36,000 psi

STRUCTURAL CONCRETE: f'c = 4,000 psi; fy = 60,000 psi; n = 8

INDEX OF SHEETS
(CB 9A) A- SITUATION & LAYOUT

(CB 9B) B- SECTION DETAILS

(CB 9C) C- SCHEDULE OF INSTALLATION FOR 18-42 INCH RCP. 12-48 INCH CMP

(CB 9D) D-SCHEDULE OF INSTALLATION FOR 48-66 INCH RCP. 60-78 INCH CMP

NOTES
1. USE COATED DEFORMED-CARBON REINFORCING STL BARS CONFORMING TO ASTM A 775, AASHTO M 111 AND M 31 GRADE 60 RESPECTIVELY OR AS REFERENCED IN SECTION 02833.
2. FIELD CUT AND BEND REINFORCING STEEL AS NECESSARY TO CLEAR PIPES AND MAINTAIN 2 INCH COVER. REPAIR ANY DAMAGE OR CUTS TO THE COATING ON REINFORCING BARS.
3. USE CLASS AA (AE) CONCRETE.
4. USE TYPE II CEMENT (LOW ALKALI).
5. PROVIDE 2 INCH CONCRETE COVER TO REINFORCING STEEL.
6. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
7. SEE STD DWG GF 3 OR GF 5 FOR GRATE AND FRAME.
8. SEE ROADWAY PLANS FOR NUMBER, LOCATION, AND SIZE OF PIPE.
9. SEE STD DWG CB 1 AND CB 2 FOR CURB AND GUTTER APPLICATION FOR BOX ELEVATIONS. INCLUDE CONCRETE QUANTITIES FOR CURB AND GUTTER IN ROADWAY QUANTITIES.

REVISIONS

NO	DATE	BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH
STANDARD DRAWING EDITION
2025 Standard Drawing

STANDARD CATCH BASIN AND CLEANOUT BOX SITUATION AND LAYOUT
STANDARD DRAWING TITLE

STD. DWG. NO.
CB 9A

SD5

SHEET 16

0 REVISION

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

	DATE
DESIGNED	JMP 2/13/2025
DRAWN	JEB
CHECKED	DWT

DRAWING SCALE
This bar measures exactly one inch on the original drawing

H:	1" = 20'	(22x34)
	1" = 40'	(11x17)
V:	1" = 10'	(22x34)
	1" = 20'	(11x17)

DRAINAGE DETAILS

20TH STREET AND VALLEY DRIVE

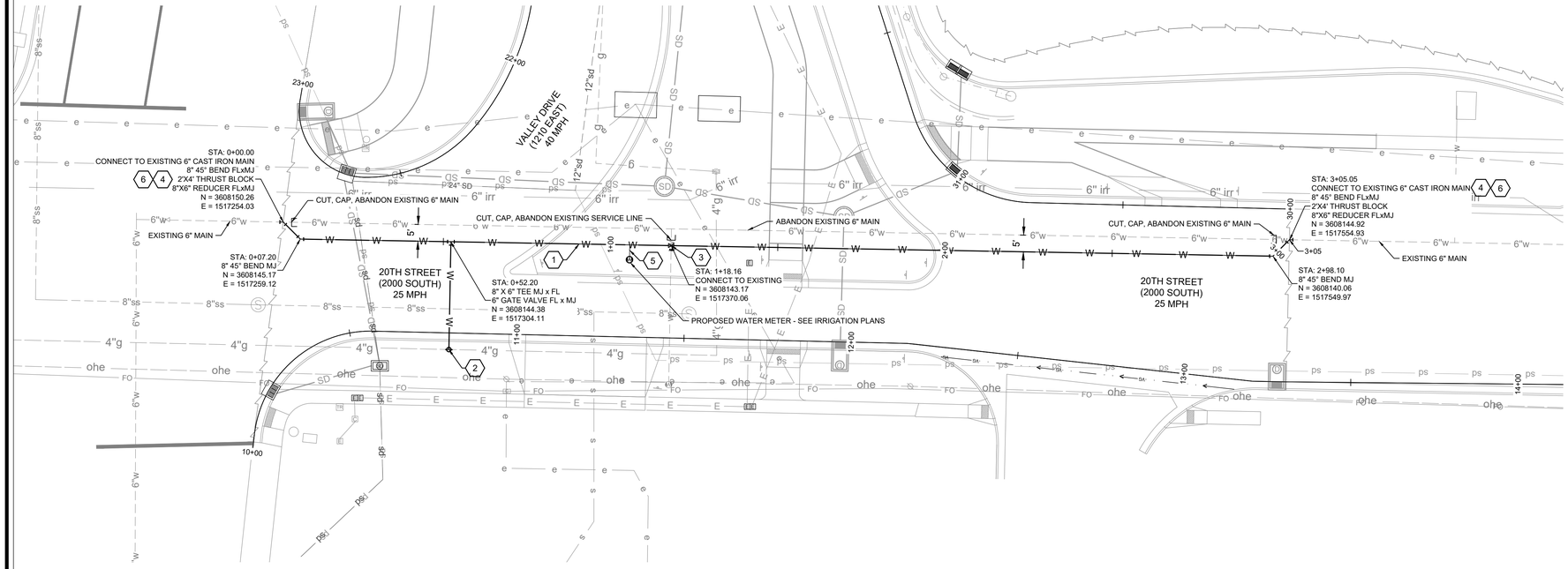
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

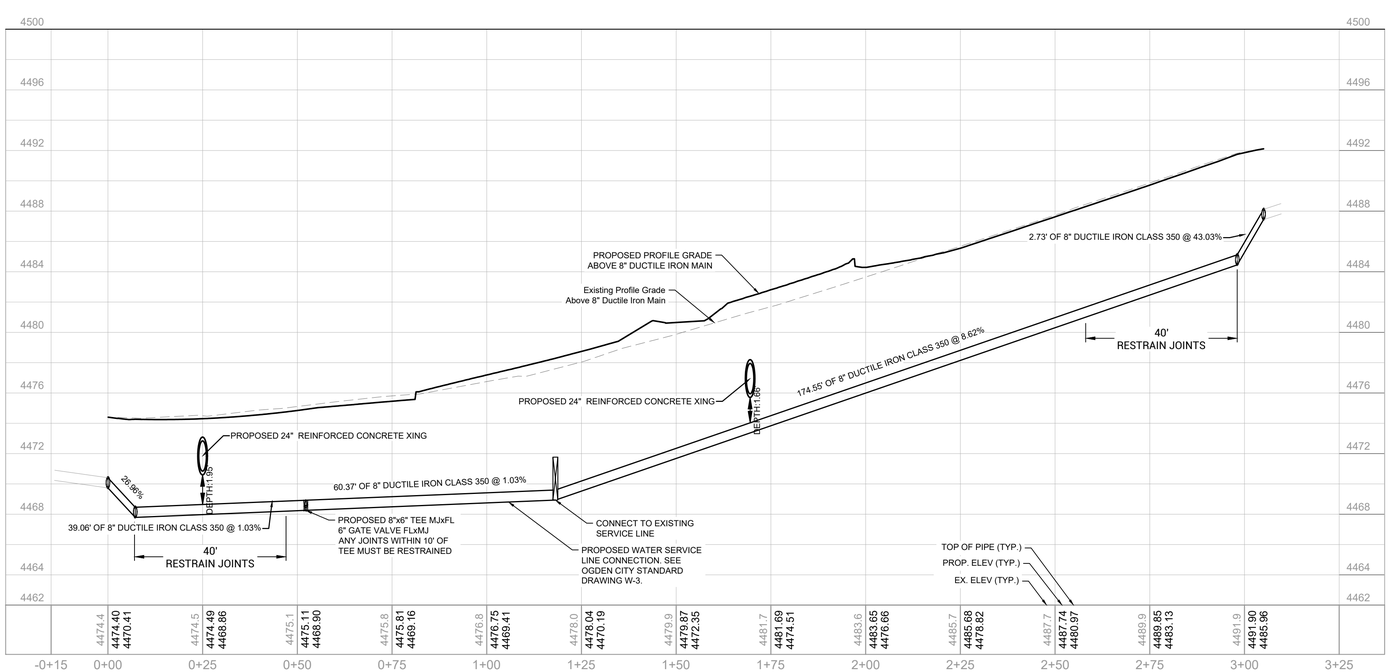
DRAWING NAME: UT-SD_DT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



20TH STREET WATER MAIN PLAN



20TH STREET WATER MAIN PROFILE

SCALE
0 20 40

KEYED NOTES:

1. 8" DUCTILE IRON CLASS 350 WATER MAIN (IMPORT SAND BEDDING)
2. FIRE HYDRANT ASSEMBLY
3. RECONNECT TO EXISTING SERVICE LINE
4. EXISTING WATER MAIN CONNECTION
5. 1" AWWA C901 SERVICE LINE (CTS POLY)
6. THRUST BLOCK PER OGDEN CITY STANDARD DRAWING W-16

NOTES:

1) USE ALL IMPORT BACKFILL FOR WATER MAIN.
2) FOLLOW ALL 811 BLUE STAKES REQUIREMENTS PER THE 811 EXCAVATOR GUIDE AND UTAH STATE CODE.

TRACER WIRE NOTES:

1) CONTRACTOR MAY UTILIZE COPPER CLAD STEEL (CCS) 12 AWG BLUE WIRE AS TRACER WIRE.
2) ALL SPLICES SHOULD USE LOCKING CONNECTORS AND NOT WIRE NUT DIRECT BURY SPLICE KITS.
3) ALL WATER MAIN TERMINATION/TIE-IN LOCATIONS ARE TO BE GROUNDED WITH A MAGNESIUM GROUNDING ROD THAT THE TRACER WIRE WILL CONNECT TO WITH A LOCKING CONNECTOR.
4) ALL SERVICE CONNECTIONS WILL UTILIZE MAINLINE TO SERVICE CONNECTORS WITHOUT CUTS TO THE TRACER WIRE.

W1

SHEET 17

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

		DATE
DESIGNED	MSP	2/13/2025
DRAWN	MSP	
CHECKED	WB	

DRAWING SCALE
This bar measures exactly one inch on the original drawing

	(22x34)	(11x17)
H:	1" = 20'	1" = 40'
V:	1" = 10'	1" = 20'

WATER MAIN PLAN AND PROFILE

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

DRAWING NAME: UT-W.dwg

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

GENERAL ELECTRICAL REQUIREMENTS

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES. ALL WORK SHALL BE DONE IN A NEAT, PROFESSIONAL, FINISHED AND SAFE MANNER, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AND ALL ELECTRICAL WORK AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ANY OTHER APPLICABLE CODES.
2. MATERIAL, EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH PROJECTS SPECIFICATIONS WHICH ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COST IN THE INITIAL BID PROPOSAL.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ENGINEER BEFORE ORDERING.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS PROJECT AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITION OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
6. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS, AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT, AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
7. ALL CONDUCTORS SHALL BE THHN/THWN COPPER, STRANDED RATED AT 600 VOLTS UNLESS OTHERWISE NOTED. ALUMINUM WIRE WILL NOT BE ALLOWED.
8. ALL CONDUCTORS SHALL BE INSTALLED IN A CONDUIT SYSTEM EXCEPT WHERE NOTED IN DRAWINGS. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR CONDUIT TYPE AND SIZE. WHERE CONDUIT SIZE IS NOT CALLED OUT, CONDUIT SHALL BE INSTALLED PER SPECIFICATION 16010 AND SIZED PER LATEST ADOPTED EDITION OF THE NEC.
9. ALL UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 3/4"" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. ALL UNDERGROUND ELBOWS SHALL BE RIGID LONG SWEEP WRAPPED WITH 3M-5O 10 MIL PIPE WRAP OR APPROVED EQUAL EXCEPT FOR COMMUNICATIONS CABLE AND CONDUIT WHEN SPECIFIED DIFFERENTLY ON THE DETAILED ELECTRICAL DRAWINGS.
10. ALL EXPOSED CONDUIT BELOW 4' SHALL BE IMC OR RIGID STEEL CONDUIT, WITH A MINIMUM SIZE OF 1" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. EMT WILL BE PERMITTED, ONLY IN WALL OR ABOVE 4' AFF. EXPOSED PVC CONDUIT SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE IN DRAWINGS.
11. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE RATED FOR HEAVY DUTY SERVICE.
12. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE GROUNDED BODY TYPE DEVICES.
13. THE CONTRACTOR SHALL INSTALL ALL INSTRUMENTS AND CONTROLS, INCLUDING HVAC AND CONTROL PANELS. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL INSTRUMENT, CONTROL AND HVAC DRAWINGS FOR TOTAL SCOPE OF WORK.
14. ALL PANELS, DISCONNECTS AND SWITCHGEAR ON THE OUTSIDE OF THE BUILDING SHALL BE NEMA 3R TYPE ENCLOSURES UNLESS OTHERWISE SPECIFIED. CT CABINET AND METER BASE SHALL BE OUTSIDE THE BUILDING.
15. SURGE PROTECTIVE DEVICES (SPD) SHALL BE SIZED FOR 160KA UNLESS OTHERWISE NOTED.
16. ALL CONDUIT FOR ALL EQUIPMENT, INCLUDING EQUIPMENT FURNISHED BY OTHERS, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
17. ALL CONDUIT, WHERE LEAVING ELECTRICAL EQUIPMENT TO GO UNDERGROUND, MUST BE ANCHORED TO THE FOUNDATION WITH STAND-OFF BRACKETS TO ALLOW FOR SUFFICIENT CLEARANCE FOR FOOTINGS AND WALL STUDS ON THE WALLS IN THE BUILDING. ALL RGS CONDUIT AND ELBOWS USED UNDERGROUND WILL BE WRAPPED WITH AN APPROVED PIPE WRAP. (TYP. FOR ALL BUILDINGS)
18. ALL WIRING IN CLASS I HAZARDOUS LOCATIONS SHALL COMPLY WITH NEC 501. WET WELL SHALL BE CONSIDERED CLASS I DIV 1, GROUPS C&D.

LEGEND

(SYMBOLS MAY OR MAY NOT BE USED IN DRAWINGS)

- DIRECT BURIED OR CONCRETE EMBEDDED CONDUIT
- 240V STREETLIGHT ASSEMBLY
- METER PEDESTAL
- EXISTING FENCE
- EXISTING SURVEY TOPOGRAPHY
- EXISTING LANDSCAPE

GENERAL ELECTRIC ABBREVIATIONS

MCPO	MOTOR CIRCUIT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
SPC	SPARE CONDUIT
PLC	PROGRAMMABLE LOGIC CONTROLLER
ATS	AUTOMATIC TRANSFER SWITCH
LCP	LOCAL CONTROL PANEL
C	CONDUIT
CB	CIRCUIT BREAKER
CNTL	CONTROL
IC	INSTRUMENTATION CONDUIT
INST	INSTRUMENT
HMI	HUMAN MACHINE INTERFACE
SSSS	SOLID STATE SOFT START
ACB	AIR CIRCUIT BREAKER
AFF	ABOVE FINNISHED FLOOR
AFG	ABOVE FINISHED GRADE
	ELECTRICAL MANHOLE
EMH	MASTER TERMINAL UNIT
MTU	TWISTED SHIELDED PAIRS
TSP	VARIABLE FREQUENCY DRIVE
VFD	SPARE INSTRUMENT CONDUIT
SPIC	WEATHERPROOF
WP	MOTOR OVERLOAD
OL	LIGHTING PANEL
LP	REMOTE TERMINAL UNIT
RTU	SURGE PROTECTIVE DEVICE
SPD	POWER PANEL
PP	PUMP CONTROL PANEL
PCP	

LT1

SHEET 18

0 REVISION

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

ELECTRICAL NOTES AND SYMBOLS

20TH STREET AND VALLEY DRIVE

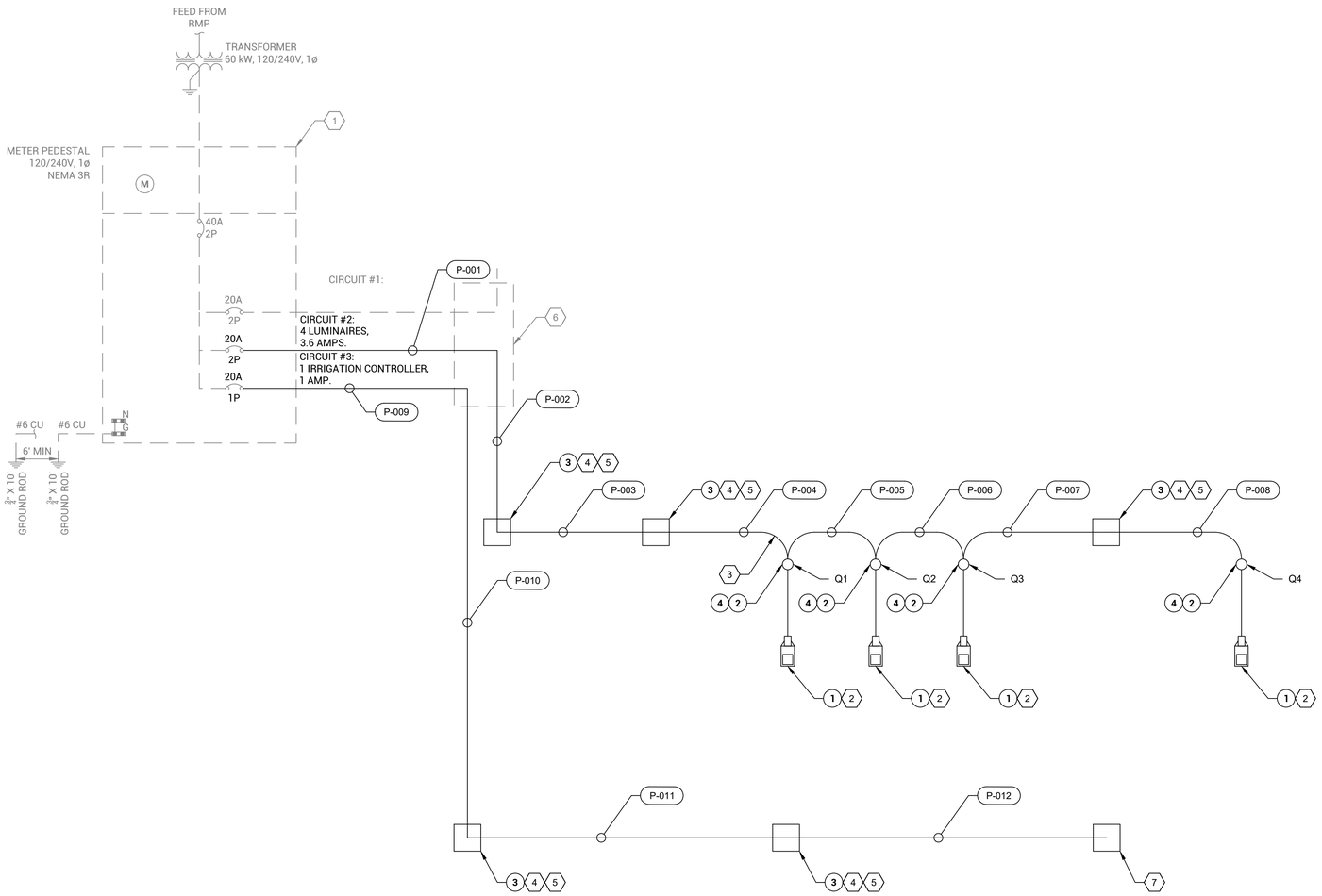
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

DRAWING NAME: UT-LT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



SHEET NOTES:

1. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, COMPACTION, AND THE INSTALLATION OF CONDUIT SHOWN AS NEW OR TO BE EXTENDED TO NEW/EXISTING EQUIPMENT LOCATION.
3. PROVIDE BONDING AND GROUND PER LATEST EDITION OF NEC.
4. ALL UNDERGROUND SCHEDULE 40 PVC ARE TO HAVE LONG SWEEP RIDGED METAL ELBOWS THAT ARE DOUBLE LAYER TAPED TO 4" ABOVE GRADE, WITH 3M 10MIL PIPE WRAP.

KEYED NOTES:

1. EXISTING METER PEDESTAL AND PHOTOCELL PROTECT IN PLACE.
2. ALL POLES AND COBRA HEADS ARE CONTRACTOR INSTALLED. SEE EQUIPMENT SCHEDULE ON LT-04.
3. NOT USED
4. INSTALL CONCRETE PULL BOX LABELED AS POWER ON LID.
5. BOND TO ALL ELECTRODES PRESENT PER NEC 250.
6. EXISTING PULLBOX. PROTECT IN PLACE. INSTALL NEW CABLING IN EXISTING CONDUIT FROM EXISTING PULLBOX TO EXISTING METER PEDESTAL. INSTALL NEW 20AMP CIRCUIT BREAKER IN THE PANEL. COORDINATE WITH OGDEN CITY FOR THE INSTALLATION OF LIGHTING CONTROLS AS NEEDED.
7. INSTALL CONCRETE BASE FOR TOP ENTRY ENCLOSURE. CONNECT 120V SERVICE TO DUPLEX GFCI RECEPTICAL INSIDE THE ENCLOSURE PEDESTAL. CONTRACTOR TO PROVIDE RECEPTICAL. REFERENCE IRRIGATION PLANS (LP4 AND LP5) FOR PEDESTAL ENCLOSURE AND CONCRETE PAD DETAILS.

LT2

SHEET 19

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing

	(22x34)	(11x17)
H:	1" = 20'	1" = 40'
V:	1" = 10'	1" = 20'

ELECTRICAL ONE-LINE

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:45 AM

DRAWING NAME: UT-LT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT TAG	DESCRIPTION	ROUTING		MIN. CONDUIT		CONDUCTORS(CU) PER C.		VOLTAGE	REMARKS OR REFERENCE DRAWING
		FROM	TO	QTY	SIZE	(QTY) & SIZE	GND		
P-001	METER PEDESTAL TO PULL BOX	METER PEDESTAL	PULL BOX	1	2"	(3) #2 AWG	#6	240	EXISTING PULL BOX. PROTECT IN PLACE. INSTALL NEW CABLING IN EXISTING CONDUIT FROM EXISTING METER PEDESTAL TO EXISTING PULL BOX.
P-002	PULL BOX TO PULL BOX	PULL BOX	PULL BOX	1	2"	(3) #2 AWG	#6	240	
P-003	PULL BOX TO PULL BOX	PULL BOX	PULL BOX	1	2"	(3) #2 AWG	#6	240	
P-004	PULL BOX TO Q1	PULL BOX	Q1	1	2"	(3) #2 AWG	#6	240	
P-005	Q1 TO Q2	Q1	Q2	1	2"	(3) #2 AWG	#6	240	
P-006	Q2 TO Q3	Q2	Q3	1	2"	(3) #2 AWG	#6	240	
P-007	Q3 TO PULL BOX	Q3	PULL BOX	1	2"	(3) #2 AWG	#6	240	
P-008	PULL BOX TO Q4	PULL BOX	Q4	1	2"	(3) #2 AWG	#6	240	
P-009	METER PEDESTAL TO PULLBOX	METER PEDESTAL	PULLBOX	1	2"	(2) #10 AWG	#6	120	EXISTING PULL BOX. PROTECT IN PLACE. INSTALL NEW CABLING IN EXISTING CONDUIT FROM EXISTING METER PEDESTAL TO EXISTING PULL BOX.
P-010	PULLBOX TO PULLBOX	PULLBOX	PULLBOX	1	2"	(2) #10 AWG	#6	120	INSTALL IN SAME TRENCH AS P-002
P-011	PULLBOX TO PULLBOX	PULLBOX	PULLBOX	1	2"	(2) #10 AWG	#6	120	INSTALL IN SAME TRENCH AS P-003
P-012	PULLBOX TO ENCLOSURE	PULLBOX	ENCLOSURE PEDESTAL	1	2"	(2) #10 AWG	#6	120	

LT3

SHEET 20

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

ELECTRICAL CABLE AND CONDUIT SCHEDULE

20TH STREET AND VALLEY DRIVE

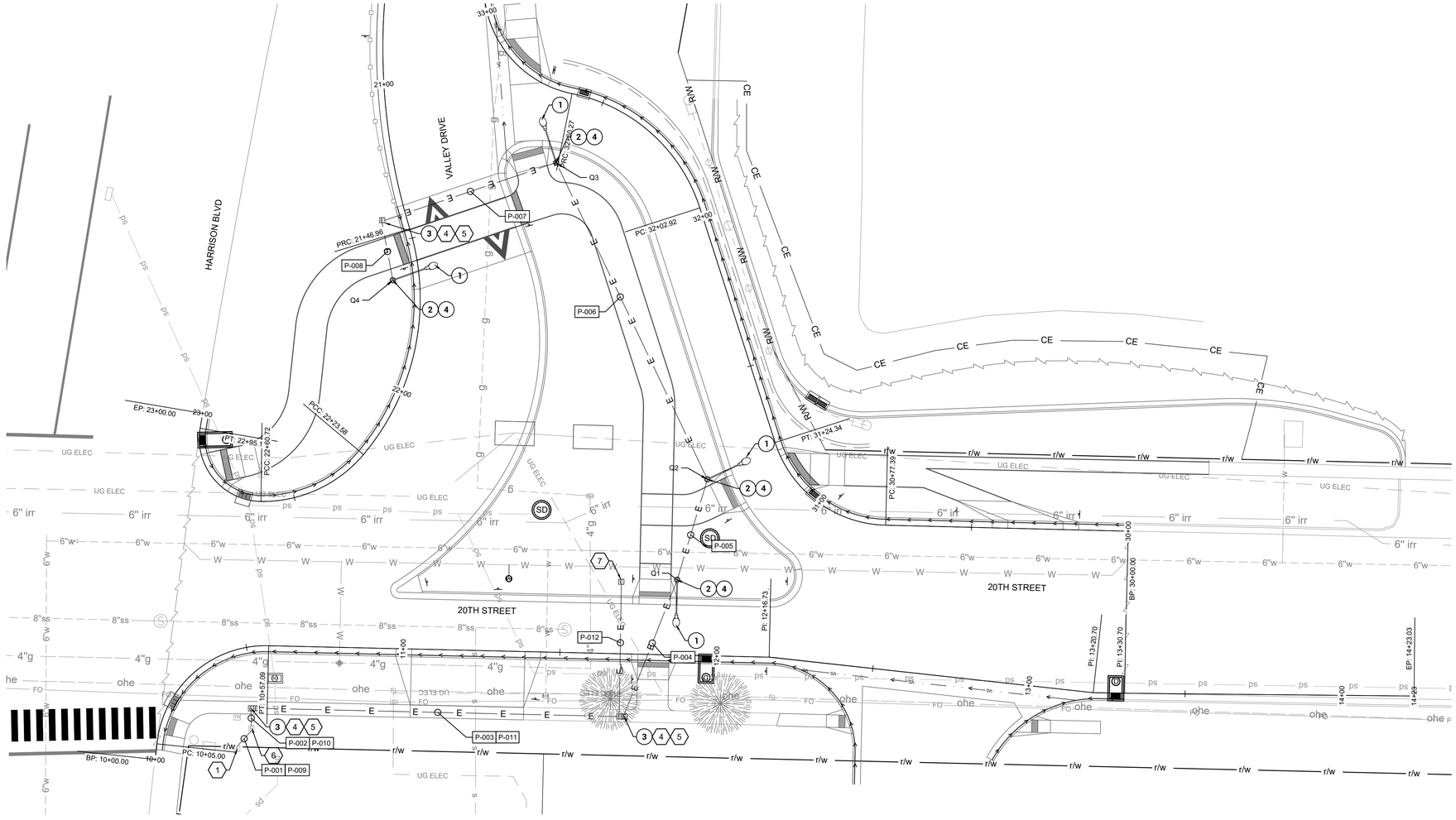
20TH STREET AND VALLEY DRIVE

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

DRAWING NAME: UT-LT.dwg

PLOT DATE: 3/11/2025 11:46 AM



GENERAL NOTES:

1. CONTRACTOR TO COMPLY WITH GENERAL ELECTRICAL REQUIREMENTS ON DRAWING LT-01.
2. CONDUITS SHOWN ARE SCHEMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE CONDUIT AS NECESSARY TO AVOID OBSTACLES AND OTHER EQUIPMENT.
3. WHEN REUSING EXISTING CONDUIT SYSTEM, CONTRACTOR SHALL INSPECT EXISTING SYSTEM AND REPLACE CONDUIT WHICH IS DAMAGED OR OTHERWISE NOT SUITABLE FOR USE.

KEYED NOTES:

1. EXISTING METER PEDESTAL AND PHOTOCELL PROTECT IN PLACE.
2. ALL POLES AND COBRA HEADS ARE CONTRACTOR INSTALLED. SEE EQUIPMENT SCHEDULE ON LT-04.
3. NOT USED
4. INSTALL CONCRETE PULL BOX LABELED AS POWER ON LID.
5. BOND TO ALL ELECTRODES PRESENT PER NEC 250.
6. EXISTING PULLBOX. PROTECT IN PLACE. INSTALL NEW CABLING IN EXISTING CONDUIT FROM EXISTING PULLBOX TO EXISTING METER PEDESTAL. INSTALL NEW 20AMP CIRCUIT BREAKER IN THE PANEL. COORDINATE WITH OGDEN CITY FOR THE INSTALLATION OF LIGHTING CONTROLS AS NEEDED.
7. INSTALL CONCRETE BASE FOR TOP ENTRY ENCLOSURE. CONNECT 120V SERVICE TO DUPLEX GFCI RECEPTICAL INSIDE THE ENCLOSURE PEDESTAL. CONTRACTOR TO PROVIDE RECEPTICAL. REFERENCE IRRIGATION PLANS (LP4 AND LP5) FOR PEDESTAL ENCLOSURE AND CONCRETE PAD DETAILS.

EQUIPMENT SCHEDULE

ITEM #	DESCRIPTION	QUANTITY	SPECIFICATION/MODEL #	MANUFACTURER/COMMENTS	FURNISHED BY
1	COBRA HEAD STREET LIGHT FIXTURE, TYPE 3	4	ERL1015C540EBLACKGILX	MOUNTAIN STATES LIGHTING	CONTRACTOR
2	30' LIGHT POLE AND BASE	4		UDOT SML/BASE BY CONTRACTOR	BY STATE OF UTAH
3	12"X12" PULL BOX	5	1212 (OLDCASTLE POLYMER)	OLDCASTLE PRECAST	CONTRACTOR
4	SINGLE 15' ARM	4		UDOT SITE MATERIALS LIST	BY STATE OF UTAH

*NOTE:

LT4

SHEET 21

0 REVISION

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13556699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

LIGHTING PLAN

20TH STREET AND VALLEY DRIVE

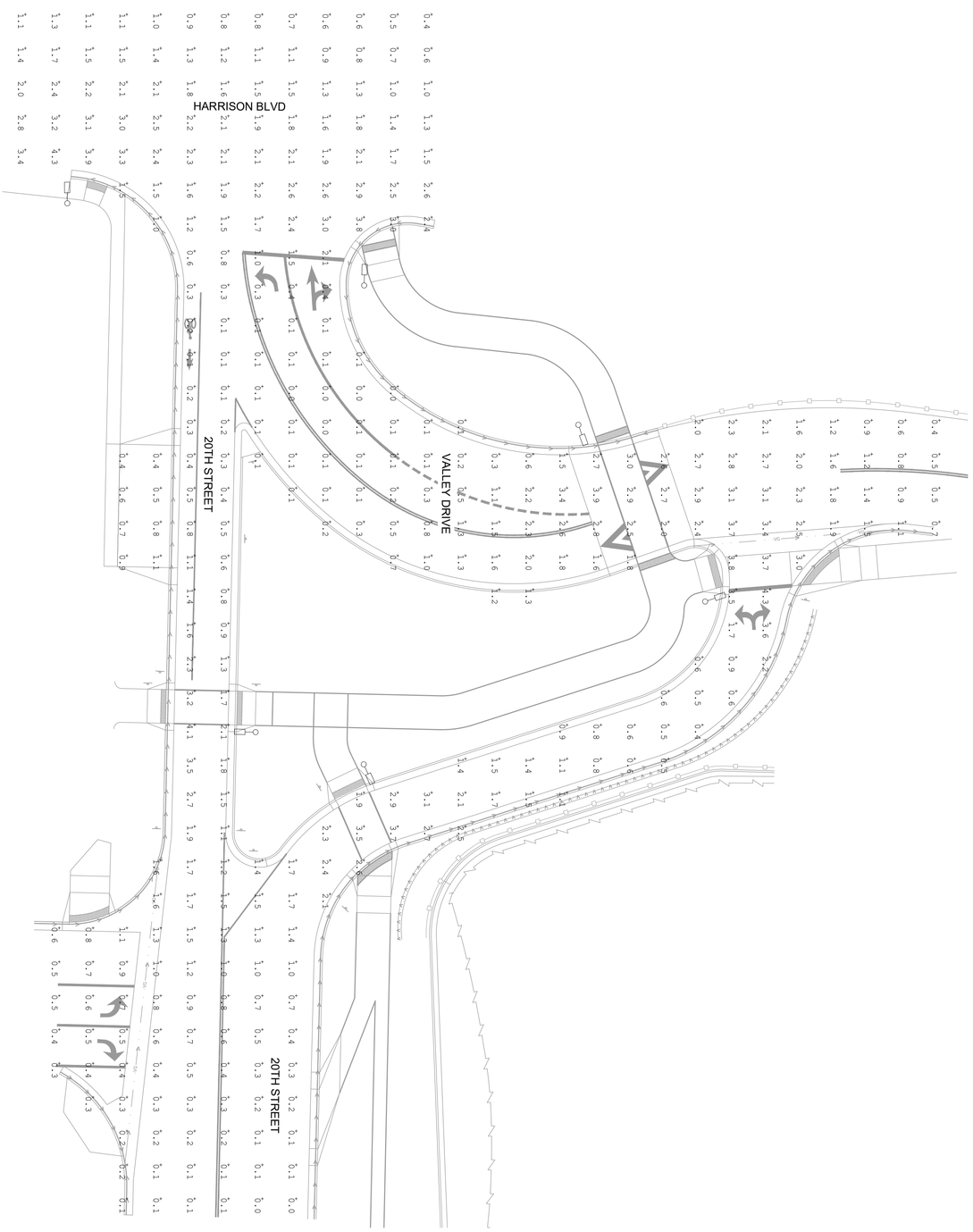
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:46 AM

DRAWING NAME: UT-LT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



1 PHOTOMETRIC PLAN

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

LEGEND

QTY	
6	PROPOSED STREET LIGHT

REFER TO CIVIL DRAWINGS FOR LUMINAIRE SCHEDULE

Kimley»Horn

111EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

PHOTOMETRIC PLAN

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: Photometrics.dwg

PLOT DATE: 3/11/2025 11:46 AM

DESIGNED ▶	MSP	DATE
DRAWN ▶	RLF	2/13/2025
CHECKED ▶	DJC	

DRAWING SCALE

H: NONE (22x34)
NONE (11x17)

V: NONE (22x34)
NONE (11x17)

This bar measures exactly one inch on the original drawing

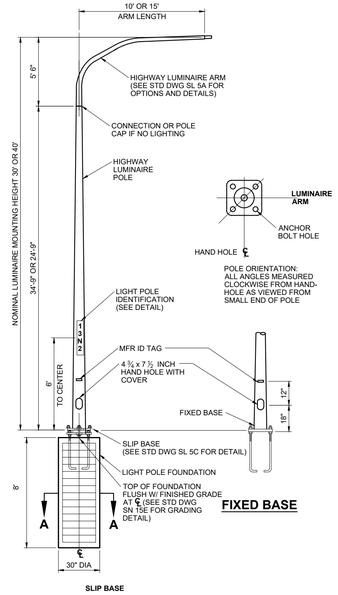
LICENSED PROFESSIONAL ENGINEER
NO. 13950999-2202
DAVID TUSLER
ELECTRONIC SIGNATURE
STATE OF UTAH

REV	DATE	DESCRIPTION

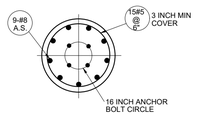
E1

SHEET 1

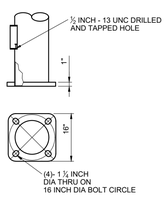
0 REVISION



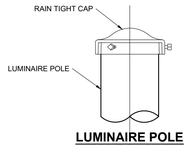
FIXED BASE



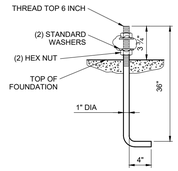
SECTION A-A



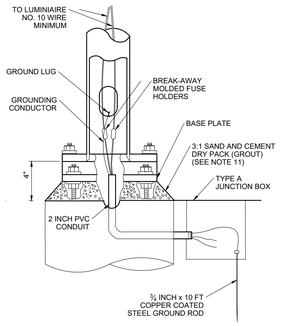
FIXED BASE PLATE DETAIL



LUMINAIRE POLE CAP DETAIL



1 - INCH ANCHOR BOLT



TYPICAL ELECTRICAL CONNECTIONS

NOTES:

1. LUMINAIRE POLE ASSEMBLY CONSISTS OF A POLE, ARM, BASE, INTERNAL CONDUCTORS, IDENTIFICATION, SPLICES, MOLDED CONNECTORS, FUSE HOLDERS, ANCHOR BOLTS, HARDWARE AND SLIP BASE OR FIXED BASE.
2. LUMINAIRE POLE WITH BASE, LED HEADS, LUMINAIRE ARM OR VERTICAL ATTACHMENT, ANCHOR BOLTS, AND RELATED HARDWARE ARE STATE FURNISHED ITEMS.
3. ALL STEEL MATERIALS INCLUDING ANCHOR BOLTS ARE HOT-DIPPED GALVANIZED, AVOID DAMAGING THE GALVANIZED FINISH OF MATERIALS DURING TRANSPORT AND PLACEMENT.
4. ORIENT ALL LUMINAIRE ARMS AT RIGHT ANGLES TO THE SURVEY LINE OF ROADWAY UNLESS OTHERWISE SPECIFIED ON PLAN SHEETS. ORIENT ALL LUMINAIRE POLES SUCH THAT A TECHNICIAN FACING THE HAND HOLE WILL FACE THE ROADWAY OR ONCOMING TRAFFIC.
5. PLUMB POLE FROM THE CENTERLINE AT BASEPLATE TO THE CENTERLINE AT CONNECTION AFTER ARM EXTENSION, LUMINAIRE, AND ALL ELECTRICAL ACCESSORIES ARE IN PLACE.
6. LOCATE LUMINAIRE POLE BEHIND SIGNS WHEN THERE IS CONFLICT.
7. INSTALL RAIN TIGHT CAP ON LUMINAIRE POLE IF NO LUMINAIRE ARM OR VERTICAL LUMINAIRE ATTACHMENT WILL BE INSTALLED.
8. USE SLIP BASE ON ALL LUMINAIRE POLES EXCEPT THOSE LOCATED ON STRUCTURES OR SPECIFIED ON PLANS. SEE STD DWG SL 5C FOR SLIP BASE DETAILS.
9. USE EPOXY COATED REBAR AND CLASS AA(AE) CONCRETE FOR ALL FOUNDATIONS.
10. CAST ALL FOUNDATIONS IN PLACE AGAINST UNDISTURBED EARTH. DO NOT WELD REINFORCING STEEL.
11. INSTALL DRY PACK GROUT AFTER LUMINAIRE POLE IS PLACED IN FINAL POSITION. GROUT MAY BE PLACED VERTICALLY FLUSH WITH THE BASE PLATE OR UP TO A 45 DEGREE ANGLE.

DESIGN-ONLY NOTES:

A. THE DEPARTMENT ASSUMES RESPONSIBILITY FOR LUMINAIRE POLE AND LIGHTING WHEN TRAFFIC SIGNAL OR PEDESTRIAN EQUIPMENT IS MOUNTED TO POLE. OBTAIN APPROVAL FROM TRAFFIC AND SAFETY SIGNAL AND LIGHTING ENGINEER FOR PLACEMENT OF THIS EQUIPMENT ON LUMINAIRE POLES.

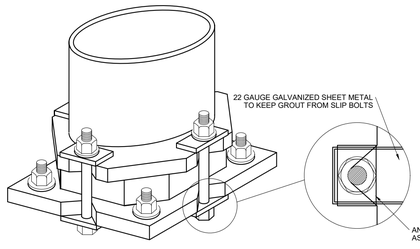
REVISIONS | NO. | DATE | APPR. | REMARKS

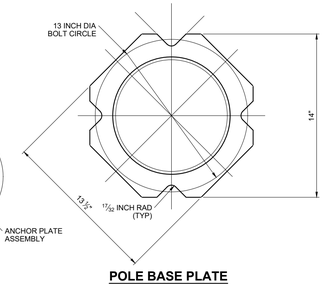
UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL — DATE
CHAIRMAN STANDARDS COMMITTEE — DATE
APPROVED
DEPUTY DIRECTOR

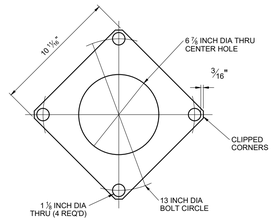
STANDARD DRAWING TITLE

STD. DWG. NO.
SL 5B





POLE BASE PLATE



KEEPER PLATE
(28 GAUGE STAINLESS STEEL)

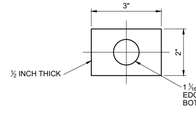
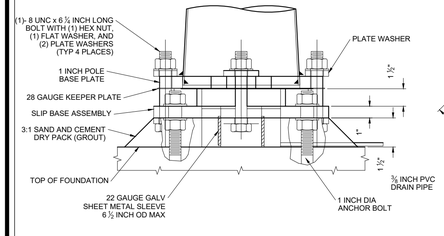
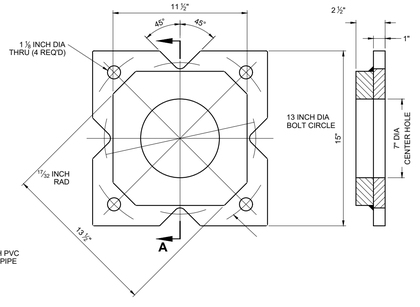


PLATE WASHER



SLIP BASE DETAIL



SLIP BASE ASSEMBLY

SECTION A-A

NOTES:

1. PLACE ANCHOR PLATE ASSEMBLY ON ANCHOR BOLT LEVELING NUTS AND SECURE IN PLACE.
2. ERECT LUMINAIRE POLE AND SECURE WITH 1 INCH DIA HIGH STRENGTH BOLTS. INSTALL BOLTS IN THE SLOTS SO THE BOLT SHANKS ARE IN CONTACT WITH THE LIGHT POLE PLATE AND ANCHOR PLATE ASSEMBLY.
3. ALL STEEL MATERIALS INCLUDING ANCHOR BOLT ARE HOT-DIPPED GALVANIZED. AVOID DAMAGING THE GALVANIZED FINISH OF MATERIALS DURING TRANSPORT AND PLACEMENT.
4. TORQUE ALL SLIP BOLTS TO 80 FT-LBS. RELEASE AND RE-TORQUE TO 70 FT-LBS.

REVISIONS | NO. | DATE | APPR. | REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL — DATE
CHAIRMAN STANDARDS COMMITTEE — DATE
APPROVED
DEPUTY DIRECTOR

STANDARD DRAWING TITLE

STD. DWG. NO.
SL 5C

LT6

SHEET 23

0 REVISION

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID
TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

LIGHTING DETAILS

20TH STREET AND VALLEY DRIVE

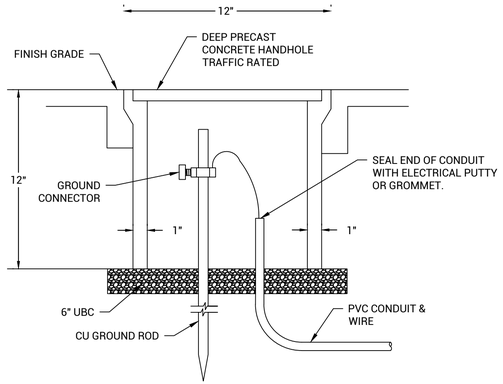
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:46 AM

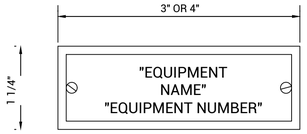
DRAWING NAME: UT-LT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



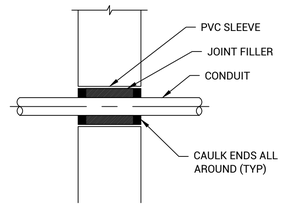
A DETAIL - GROUND WELL
N.T.S.



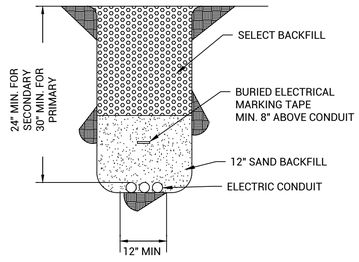
NOTES:

1. ALL LETTER TO BE WHITE 1/4" HIGH, ON A BLACK BACKGROUND UNLESS NOTED OTHERWISE.
2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTER LINE OF THE CUBICLE OR DEVICE.
3. ATTACH ALL NAMEPLATES WITH STAINLESS STEAL SCREWS.
4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND AN ADDITIONAL TEN PERCENT FOR FUTURE DEVICES

B DETAIL - NAMEPLATE
N.T.S.



C CONDUIT PENETRATION
N.T.S.



NOTES:

1. WARNING TAPE MUST BE PLACED ON TOP OF CONDUIT (5 MILS THICKNESS)
2. ALL TRENCHES MUST BE INSPECTED PRIOR TO BACKFILLING
3. TRENCHES SHOULD BE SPOT BACKFILLED TO PREVENT MOVEMENT OF TAPE DURING BACKFILL
4. SELECT BACKFILL MUST BE COMPACTED IN 1 FOOT LIFTS TO PREVENT SETTLING

D DETAIL - UNDERGROUND CONDUIT POWER CABLE TRENCH
N.T.S.

LT7

SHEET 24

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

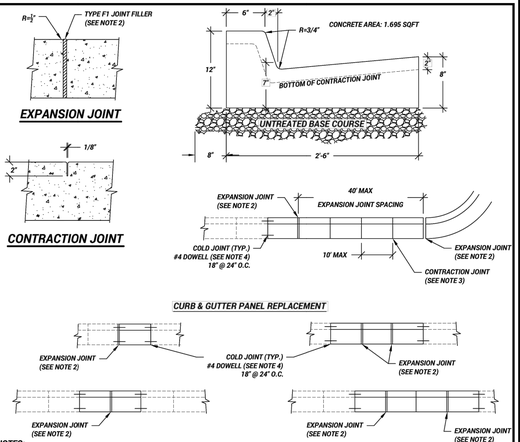
LIGHTING DETAILS

20TH STREET AND VALLEY DRIVE
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:46 AM
DRAWING NAME: UT-LT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

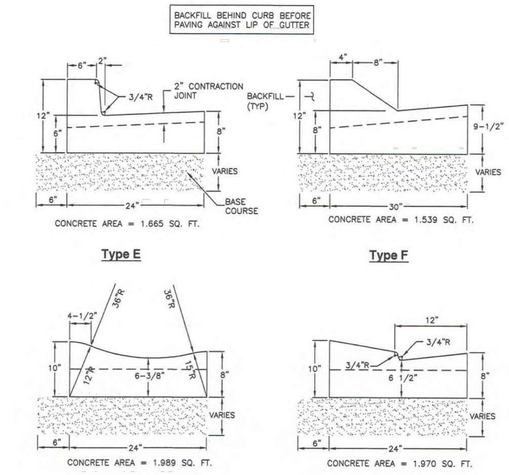


NOTES:

1. BASE COURSE SHALL BE PER APWA SECTION 32 11 23.
   - 1.1. EXTEND BASE 8" BEHIND THE CURB AND GUTTER.
   - 1.2. PROVIDE MINIMUM 8" THICK OF COMPACTED BASE COURSE.
   - 1.3. COMPACT PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING AND 6" WHEN USING HAND COMPACTION EQUIPMENT.
2. MAKE EXPANSION JOINTS VERTICAL, FULL DEPTH, 1/2" WIDE WITH TYPE F1 JOINT FILLER MATERIAL PER APWA SECTION 32 13 73.
   - 2.1. SET TOP OF FILLER FLUSH WITH THE CONCRETE.
   - 2.2. EXPANSION JOINTS ARE REQUIRED AT THE START OR END OF A STREET INTERSECTION CURB RETURN. SPACE EXPANSION JOINTS NO MORE THAN 40'.
   - 2.3. MACHINE - SLIPPED CURB & GUTTER SHALL ONLY REQUIRE EXPANSION AT START, STOP, AND CHANGE OF DIRECTION.
3. MAKE CONTRACTION JOINTS VERTICAL.
   - 3.1. 1/8" WIDE AND 2" DEEP FOR CURB & GUTTER.
4. USE No. 4 SMOOTH DOWELL BAR AT ALL COLD JOINTS. IF NO SMOOTH DOWELL BAR IS AVAILABLE, No. 4 REBAR WITH 12" PLASTIC REBAR SLEEVES IS ACCEPTABLE. ALL DOWELLS TO BE EPOXY COATED.
5. BAG MIX: MARCH - NOVEMBER: 6 1/2, DECEMBER - FEBRUARY: 7 1/2.
6. APPLY A CONCRETE CURING COMPOUND TO ALL POURED CONCRETE THAT MEETS ASTM C-309, TYPE 1 OR 2, CLASS A.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	TYPE A CURB & GUTTER	RD-4
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

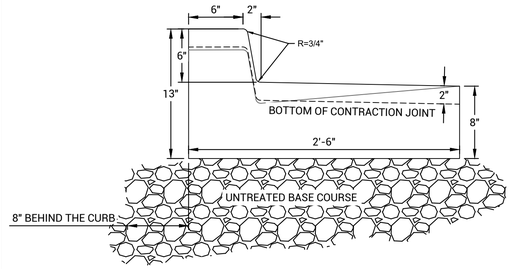
1 OGDEN CITY 30" TYPE A CURB AND GUTTER — SCALE: NTS



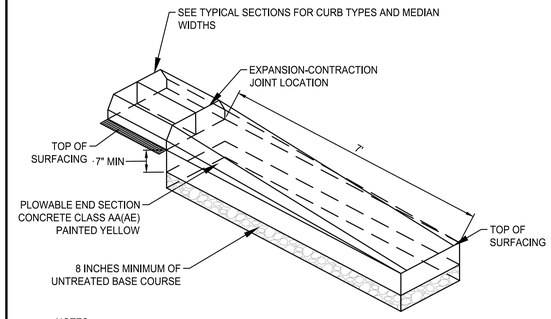
JOINT DETAIL

APWA Utah Chapter — *Curb and gutter* — Plan 205.2 April 2011

2 APWA TYPE E CURB AND GUTTER — SCALE: NTS

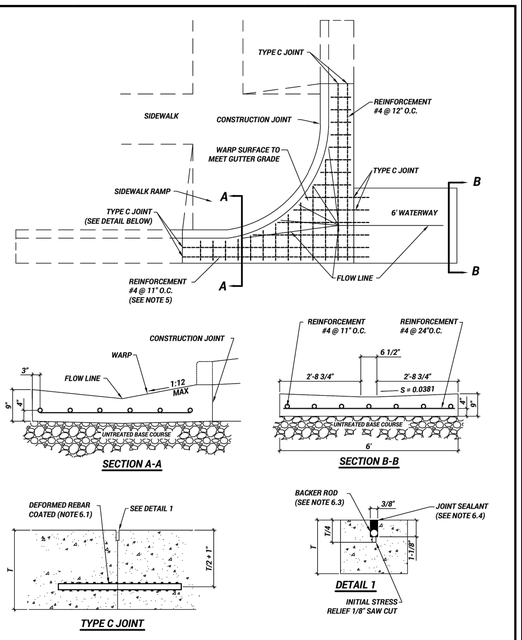


3 TYPE A SPILL CURB — SCALE: NTS



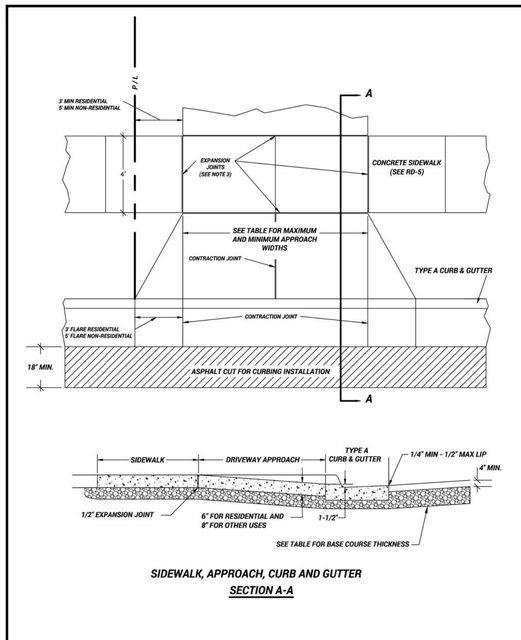
NOTES:
A. REFER TO LANDSCAPE PLANS FOR SPECIAL MATERIALS, FINISH, COLORS AND JOINTING PLAN

4 PLOWABLE END SECTION — SCALE: NTS



OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	WATERWAY TRANSITION STRUCTURES	RD-6
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 2 — 2025

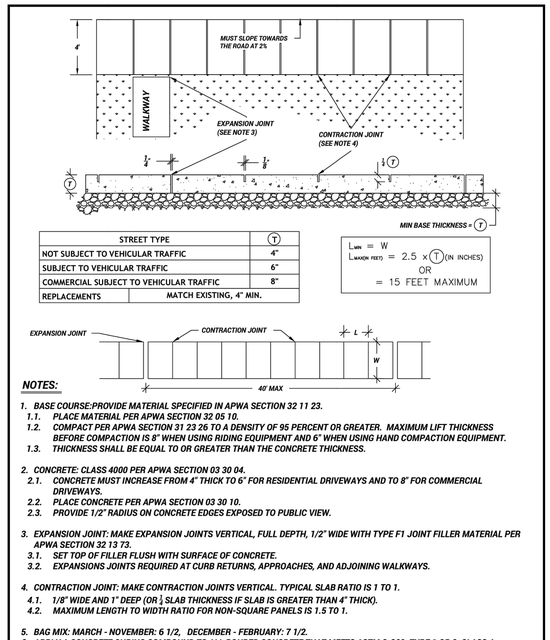
5 WATERWAY TRANSITION — SCALE: NTS



SIDEWALK, APPROACH, CURB AND GUTTER
SECTION A-A

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	DRIVEWAY APPROACH	RD-7
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 2 — 2025

6 OGDEN DRIVEWAY APPROACH DETAIL — SCALE: NTS



STREET TYPE	T
NOT SUBJECT TO VEHICULAR TRAFFIC	4"
SUBJECT TO VEHICULAR TRAFFIC	6"
COMMERCIAL SUBJECT TO VEHICULAR TRAFFIC	8"
REPLACEMENTS	MATCH EXISTING, 4" MIN.

$L_{MIN} = W$

$L_{MAX(IN\ FEET)} = 2.5 \times T_{(IN\ INCHES)}$ OR = 15 FEET MAXIMUM

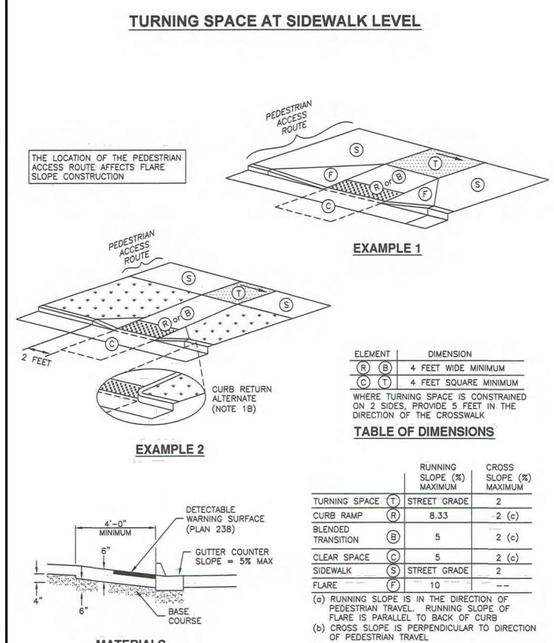
NOTES:

1. BASE COURSE:PROVIDE MATERIAL SPECIFIED IN APWA SECTION 32 11 23.
   - 1.1. PLACE MATERIAL PER APWA SECTION 32 05 10.
   - 1.2. COMPACT PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING EQUIPMENT AND 6" WHEN USING HAND COMPACTION EQUIPMENT.
   - 1.3. THICKNESS SHALL BE EQUAL TO OR GREATER THAN THE CONCRETE THICKNESS.
2. CONCRETE: CLASS 4000 PER APWA SECTION 03 30 04.
   - 2.1. CONCRETE MUST INCREASE FROM 4" THICK TO 6" FOR RESIDENTIAL DRIVEWAYS AND TO 8" FOR COMMERCIAL DRIVEWAYS.
   - 2.2. PLACE CONCRETE PER APWA SECTION 03 30 10.
   - 2.3. PROVIDE 1/2" RADIUS ON CONCRETE EDGES EXPOSED TO PUBLIC VIEW.
3. EXPANSION JOINT: MAKE EXPANSION JOINTS VERTICAL, FULL DEPTH, 1/2" WIDE WITH TYPE F1 JOINT FILLER MATERIAL PER APWA SECTION 32 13 73.
   - 3.1. SET TOP OF FILLER FLUSH WITH SURFACE OF CONCRETE.
   - 3.2. EXPANSIONS JOINTS REQUIRED AT CURB RETURNS, APPROACHES, AND ADJOINING WALKWAYS.
4. CONTRACTION JOINT: MAKE CONTRACTION JOINTS VERTICAL. TYPICAL SLAB RATIO IS 1 TO 1.
   - 4.1. 1/8" WIDE AND 1" DEEP (OR ¼ SLAB THICKNESS IF SLAB IS GREATER THAN 4" THICK).
   - 4.2. MAXIMUM LENGTH TO WIDTH RATIO FOR NON-SQUARE PANELS IS 1.5 TO 1.
5. BAG MIX: MARCH - NOVEMBER: 6 1/2, DECEMBER - FEBRUARY: 7 1/2.
6. APPLY A CONCRETE CURING COMPOUND TO ALL POURED CONCRETE THAT MEETS ASTM C-309, TYPE 1 OR 2, CLASS A.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	SIDEWALK DETAIL	RD-5
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

7 OGDEN SIDEWALK DETAIL — SCALE: NTS

TURNING SPACE AT SIDEWALK LEVEL



ELEMENT		DIMENSION
R	B	4 FEET WIDE MINIMUM
C	T	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS

			RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	T	STREET GRADE	2	
CURB RAMP	R	8.33		2 (c)
BLENDED TRANSITION	B	5		2 (c)
CLEAR SPACE	C	5		2 (c)
SIDEWALK	S	STREET GRADE	2	
FLARE	F	10	--	--

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL

SLOPE TABLE

APWA Utah Chapter — *Mid-block curb cut assembly* — Plan 236.1 September 2011

8 MID-BLOCK CURB CUT ASSEMBLY — SCALE: NTS

DT1
SHEET 25
REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — NO. 13656699-2202 — DAVID TUSLER — 3/11/2025 — ELECTRONIC SEAL — STATE OF UTAH

DESIGNED ▶ MSP
DRAWN ▶ MSP
CHECKED ▶ DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

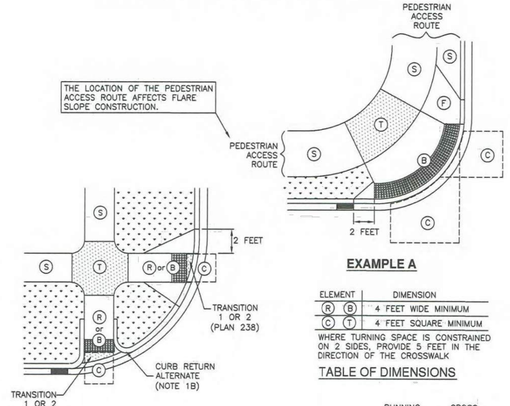
DETAILS
20TH STREET AND VALLEY DRIVE
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:46 AM
DRAWING NAME: DT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

TURNING SPACE AT SIDEWALK LEVEL



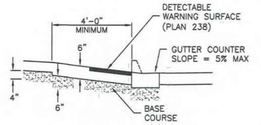
EXAMPLE A

EXAMPLE B

ELEMENT		DIMENSION
R	B	4 FEET WIDE MINIMUM
C	T	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS



MATERIALS

		RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	T	2	2
CURB RAMP	R	8.33	2 (c)
BLENDED TRANSITION	B	5	2 (c)
CLEAR SPACE	C	5	2 (c)
SIDEWALK	S	STREET GRADE	2
FLARE	F	10	--

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL
(c) SLOPE MAY EQUAL STREET OR HIGHWAY GRADE AT CROSSWALKS THAT ARE WITHOUT VEHICULAR YIELD OR STOP CONTROL

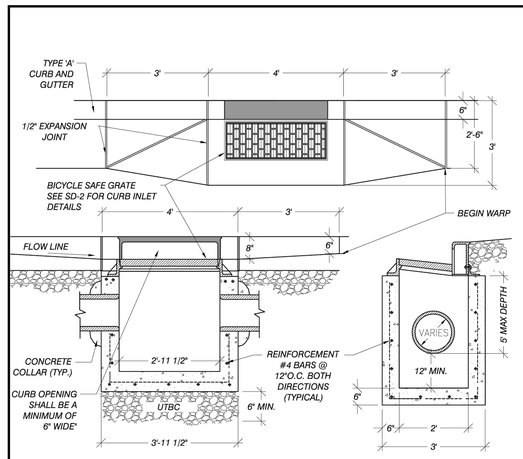
SLOPE TABLE

APWA Utah Chapter

Corner curb cut assembly

Plan 235.1
September 2011

9 CORNER CURB CUT ASSEMBLY — SCALE: NTS

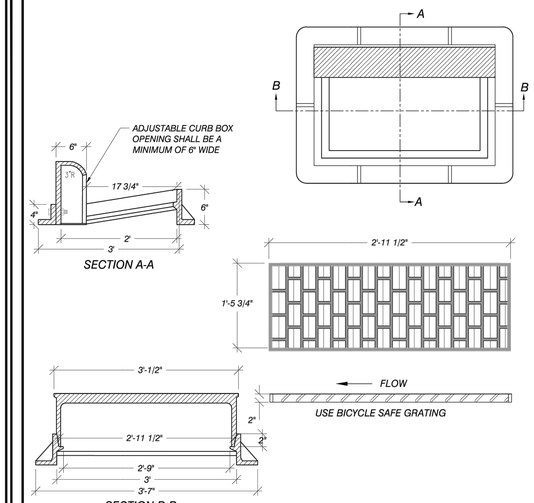


NOTES:

1. COMPACT BASE COURSE AND BACKFILL PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT. MAXIMUM LIFT THICKNESS IS 8" BEFORE COMPACTION.
   1.1. BACKFILL: PROVIDE AND PLACE PER APWA SECTION 31 23 23 ON ALL SIDES OF THE BASIN.
   1.2. PROVIDE BASE COURSE MATERIAL PER APWA SECTION 32 11 23. PLACE MATERIAL PER APWA SECTION 31 23 23.
2. REINFORCEMENT SHALL BE PER ASTM A 615, GRADE 60, DEFORMED STEEL.
3. CONCRETE SHALL BE CLASS 4000 PER APWA SECTION 03 30 04. PLACE CONCRETE PER APWA SECTION 03 30 10. CURE PER APWA SECTION 03 39 00. PRECAST CATCH BASINS ARE ACCEPTABLE.
4. CURB FACE OPENING SHALL BE AT LEAST 6" WIDE. PROVIDE A 2" DROP BETWEEN THE 'BEGIN WARP' LINE IN THE GUTTER AND THE TOP OF THE GRATE AT THE CURB OPENING.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	CATCH BASIN WITH CURB INLET	SD-1
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

10 CATCH BASIN WITH CURB INLET — SCALE: NTS

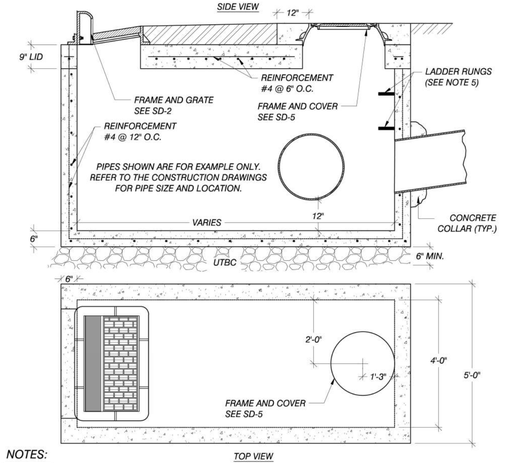


NOTES:

1. CASTING: GREY IRON CLASS 35 MINIMUM PER ASTM A 48.
2. COATINGS: EXCEPT MACHINED SURFACES, COAT ALL METAL PARTS WITH ASPHALTUM PAINT.
3. USE STAINLESS STEEL BOLTS, NUTS, AND WASHERS.
4. SEE SD-1 FOR INLET BOX DETAILS.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	35 1/2" GRATE AND FRAME WITH ADJUSTABLE CURB BOX	SD-2
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

11 35 1/2" GRATE AND FRAME WITH CURB BOX — SCALE: NTS



NOTES:

1. COMPACT BACKFILL AND BASE COURSE PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING AND 6" WHEN USING HAND COMPACTION EQUIPMENT.
   1.1. BACKFILL: PROVIDE AND PLACE PER APWA SECTION 31 23 23 ON ALL SIDES OF THE BASIN.
   1.2. UNTREATED BASE COURSE: PROVIDE MATERIAL PER APWA SECTION 32 11 23. PLACE MATERIAL PER APWA SECTION 31 23 23.
2. REINFORCEMENT SHALL BE PER ASTM A 615, GRADE 60, DEFORMED STEEL. SEE APWA SECTION 03 20 00.
3. CONCRETE SHALL BE CLASS 4000 PER APWA SECTION 03 30 04. PLACE CONCRETE PER APWA SECTION 03 30 10. CURE PER APWA SECTION 03 39 00. PRECAST BOXES ARE ACCEPTABLE.
4. CURB FACE OPENING: OPENING SHALL BE AT LEAST 6" WIDE. PROVIDE A 2" DROP BETWEEN THE 'BEGIN WARP' LINE IN THE GUTTER AND THE TOP OF THE GRATE AT THE CURB OPENING.
5. LADDER RUNGS ARE REQUIRED IN ALL BOXES. SEE SS-6 FOR TYPICAL STEP REQUIREMENTS.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	COMBINATION INLET / CLEANOUT BOX	SD-3
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

12 COMBINATION INLET/ CLEAN OUT BOX — SCALE: NTS

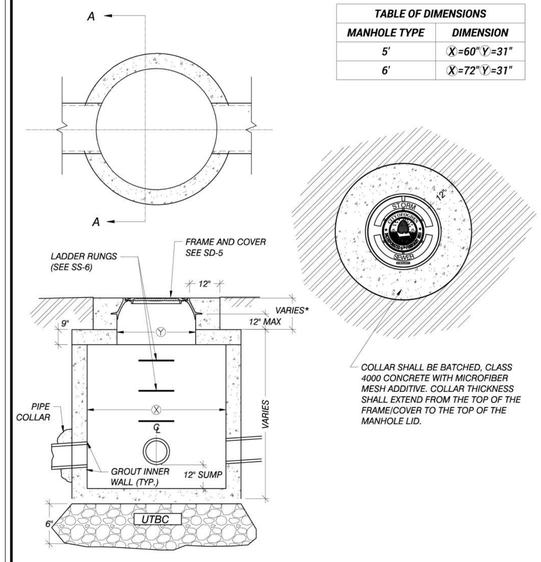


TABLE OF DIMENSIONS	
MANHOLE TYPE	DIMENSION
5'	X=60" Y=31"
6'	X=72" Y=31"

COLLAR SHALL BE BATCHED, CLASS 4000 CONCRETE WITH MICROFIBER MESH ADDITIVE. COLLAR THICKNESS SHALL EXTEND FROM THE TOP OF THE FRAME/COVER TO THE TOP OF THE MANHOLE LID.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	STORM DRAIN MANHOLE (PRECAST)	SD-4
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 2 — 2025

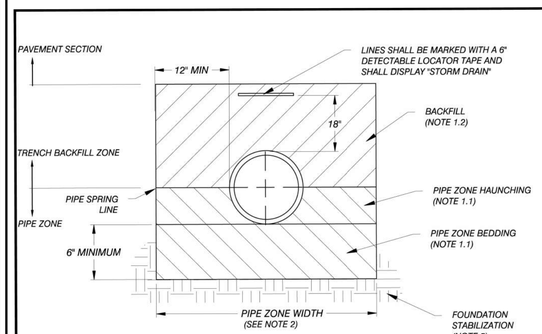
13 STORM DRAIN MANHOLE (PRECAST) — SCALE: NTS

NOTES:

1. CONTACT THE OGDEN CITY STORM WATER DIVISION FOR DETAILS AND ORDERING INFORMATION FOR SEWER LID AND FRAME (801) 629-8331.
2. LOW PROFILE LIDS WILL NOT BE ALLOWED IN ANY OGDEN CITY RIGHT OF WAY.
3. CASTINGS: GREY IRON CLASS 35 MINIMUM PER ASTM A 48.
4. COATINGS:EXCEPT MACHINED SURFACES, COAT ALL METAL PARTS
5. HEAT NUMBER: PLACE FOUNDRY AND HEAT NUMBER ON THE INSIDE OF THE FRAME AND ON THE BOTTOM OF THE COVER.
6. SEE SD-3 FOR COMBINATION INLET / CLEANOUT BOX, SD-4 FOR STORM DRAIN MANHOLE DETAILS.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	STORM DRAIN MANHOLE FRAME AND COVER	SD-5
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

14 STORM DRAIN MANHOLE LID AND FRAME — SCALE: NTS



NOTES:

1. DO NOT USE SEWER ROCK OR RECYCLED FILL MATERIAL IN THE PIPE ZONE WITHOUT THE APPROVAL OF THE CITY ENGINEER. IF MANUFACTURER RECOMMENDS ANYTHING CONTRARY TO WHAT IS LISTED BELOW, CONSULT WITH THE ENGINEERING DEPARTMENT.
   1.1. HAUNCHING/BEDDING: AGGREGATE BASE COURSE (UTBC) PER 32 11 23.
      1.1.1. WATER JETTING IS NOT ALLOWED.
      1.1.2. SUBMISSION OF COMPACTION TEST DATA FOR THE HAUNCHING AREAS MAY BE REQUESTED AT ANY TIME.
   1.2. BACKFILL (ABOVE THE PIPE ZONE): IMPORT STRUCTURAL FILL (3" MINUS PER APWA 31 05 13 OR UTBC PER 32 11 23).
      1.2.1. COMPACT PER SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING AND 6" WHEN USING HAND COMPACTION EQUIPMENT.
2. PIPE ZONE WIDTH IS RECOMMENDED BY THE MANUFACTURER OF THE PIPE. WIDTH OF PIPE ZONE IS MEASURED AT THE PIPE SPRING LINE AND INCLUDES ANY NECESSARY SHEATHING. FOLLOW MANUFACTURE RECOMMENDATIONS FOR ANY TRENCH BOX APPLICATIONS.
3. INSTALL THE PIPE IN THE CENTER OF THE TRENCH. THE EDGE OF THE PIPE WALL SHALL BE A MINIMUM DISTANCE OF 12" FROM THE TRENCH WALL.
4. PEA GRAVEL (GRAVEL WITH NOMINAL SIZE LESS THAN 3/4") IS NOT ALLOWED IN ANY PART OF THE TRENCH.
5. FOUNDATION STABILIZATION REQUIRES SEWER ROCK PER APWA SECTION 31 05 13.
   5.1. INSTALLATION OF STABILIZATION-SEPARATION GEOTEXTILE PER APWA SECTION 31 05 19 WILL BE REQUIRED TO SEPARATE BACKFILL MATERIAL AND NATIVE SUBGRADE MATERIAL IF SEWER ROCK CANNOT PROVIDE A WORKING SURFACE OR PREVENT SOIL MIGRATION.

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Salt Lake Urban	STORM DRAIN PIPE ZONE	SD-6
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 — 2025

15 STORM DRAIN PIPE ZONE — SCALE: NTS

UDOT STANDARD DRAWING NOTE

1

REFER TO MOST CURRENT UDOT STANDARD (INCLUDING SUPPLEMENTAL DRAWINGS AND SPECIFICATIONS FOUND ON UDOT.UTAH.GOV

16 UDOT STANDARD DRAWINGS — SCALE: NTS

DT2

SHEET 26

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER — NO. 13656699-2202 — DAVID TUSLER — 3/11/2025 — ELECTRONIC SEAL — STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

This bar measures exactly one inch on the original drawing

DETAILS

20TH STREET AND VALLEY DRIVE

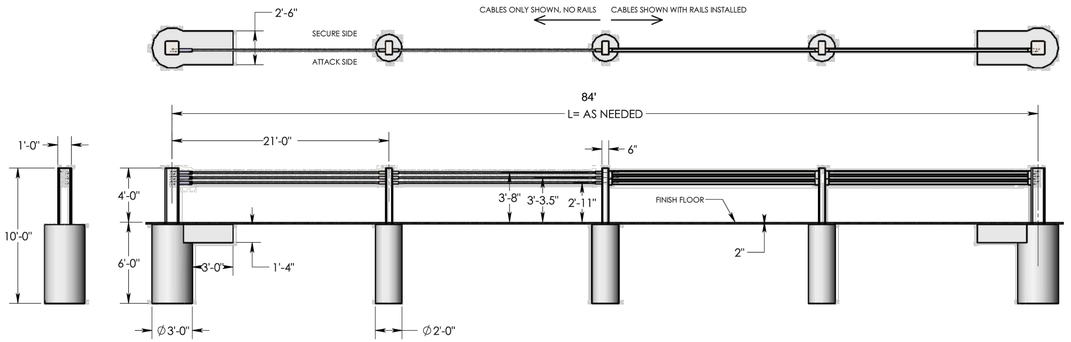
20TH STREET AND VALLEY DRIVE

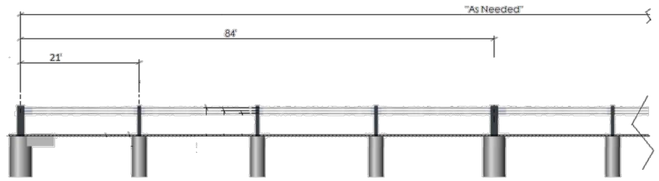
PLOT DATE: 3/11/2025 11:47 AM

DRAWING NAME: DT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176





NOTES:
1) ALL MATERIALS (POSTS, CABLES WITH THREADED STUDS & POST SLEEVES, AND RAILS) WILL BE PROVIDED BY ATLAS EXCEPT REINFORCEMENT BARS AND CONCRETE.

2) THE CONCRETE SHALL BE A MINIMUM OF 4,000 PSI.

3) ALL REBAR SHALL HAVE A MINIMUM OF 2" CONCRETE COVER, SEE REBAR DRAWINGS.

4) CABLE SHALL BE 6X36WS EIP, IWRC WIRE ROPE WITH NOMINAL STRENGTH OF 79.9 TONS (159,800 LBS.)

5) END AND LINE POST TOPS ARE AVAILABLE IN OPEN, FLAT OR SLOPED PROFILES.

6) DISTANCE BETWEEN END POSTS SHALL BE 64' AND DISTANCE AT LINE POST IS 16'. THESE DISTANCES CAN BE ADJUSTED A MAX OF +/- 6" TO ALLOW FOR DIFFERING SITE CONDITIONS AND TO ADJUST FOR INSTALLATION WITH A SECONDARY FENCE (ANTI-CLIMB, CHAIN-LINK, ORNAMENTAL, ETC.) SYSTEM.

UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .06; X.XX ± .03; X.XXX ± .02; ANGLES ± 0.5°; FRACTIONS ± 1/8; SURFACE FINISH √

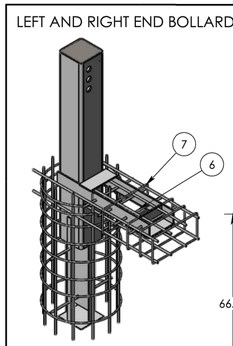
DRAWING COMPLIES WITH ASME Y14.5M - 1994 | INCH | MM | THIRD ANGLE PROJECTION

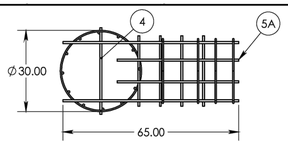
ASSA ABLOY
Atlas Security Products, Inc.
Rockville, MD

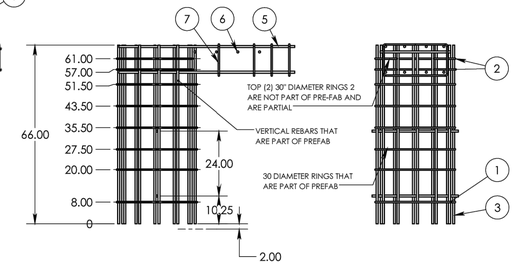
MATERIAL: SEE BOM			M30P1 CABLE FENCE
HEAT TREATMENT		DATE CREATED: 1/13/2025	DRAWN BY: now / DESIGNED BY: now
SURFACE/FINISH		DOCUMENT ID	SCALE: 1:60 / SIZE: B
MASS: NA	VOLUME: NA	SURFACE AREA: NA	DRAWING NUMBER (ALT ID): ASPI-CF-M30P1

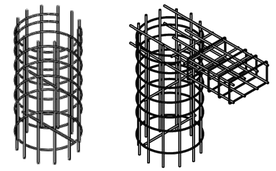
LEFT AND RIGHT END BOLLARD

REV	DESCRIPTION	DATE	ENGINEER









PREFAB CAGE

ALL REBAR SHALL HAVE A MINIMUM OF 2" CONCRETE COVER
MATERIAL :STEEL REINFORCEMENT -ASTM A615 GRADE 60

GROUP	SIZE	QTY	SHAPE
1.	#4(0.5)	6	Ø30.00
2.	#4(0.5)	2	Ø30.00, 13.00
3.	#6(0.75)	12	66.00
4.	#6(0.75)	2	32.00
5.	#6(0.75)	4	65.00
5A.	#6(0.75)	4	45.00
6.	#6(0.75)	4	26.00
7.	#4(0.5)	4	12.00, 24.00

UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .04; X.XX ± .03; X.XXX ± .02; ANGLES ± 0.5°; FRACTIONS ± 1/8; SURFACE FINISH √

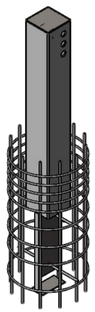
DRAWING COMPLIES WITH ASME Y14.5M - 1994 | INCH | MM | THIRD ANGLE PROJECTION

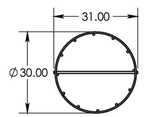
ASSA ABLOY
Atlas Security Products, Inc.
Rockville, MD

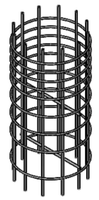
MATERIAL: SEE BOM			FOUNDATION REBAR END POST M30P1
HEAT TREATMENT		DATE CREATED: 1/13/2025	DRAWN BY: now / DESIGNED BY: now
SURFACE/FINISH		DOCUMENT ID	SCALE: 1:25 / SIZE: B
MASS: 1071.49 lb	VOLUME: 4487.24 in³	SURFACE AREA: 18763.16 in²	DRAWING NUMBER (ALT ID): LEABM-301-End Bollard Rebar

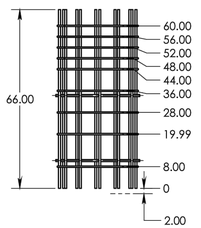
TERMINAL BOLLARD

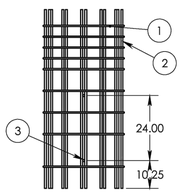
REV	DESCRIPTION	DATE	ENGINEER

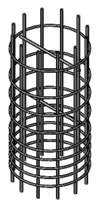












PREFAB CAGE

GROUP	SIZE	QTY	SHAPE
1.	#4(0.5)	8	Ø30.00
2.	#6(0.75)	12	66.00
3.	#6(0.75)	2	31.00

ALL REBAR SHALL HAVE A MINIMUM OF 2" CONCRETE COVER
MATERIAL :STEEL REINFORCEMENT -ASTM A615 GRADE 60

UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .06; X.XX ± .03; X.XXX ± .02; ANGLES ± 0.5°; FRACTIONS ± 1/8; SURFACE FINISH √

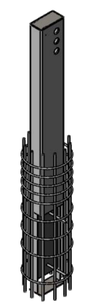
DRAWING COMPLIES WITH ASME Y14.5M - 1994 | INCH | MM | THIRD ANGLE PROJECTION

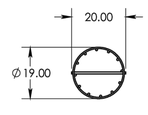
ASSA ABLOY
Atlas Security Products, Inc.
Rockville, MD

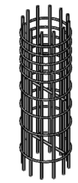
MATERIAL: SEE BOM			FOUNDATION REBAR TERMINAL POST M30P1
HEAT TREATMENT		DATE CREATED: 1/13/2025	DRAWN BY: now / DESIGNED BY: now
SURFACE/FINISH		DOCUMENT ID	SCALE: 1:25 / SIZE: B
MASS: NA	VOLUME: NA	SURFACE AREA: NA	DRAWING NUMBER (ALT ID): TNABM-301-Terminal Bollard Rebar

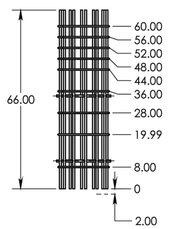
LINE BOLLARD

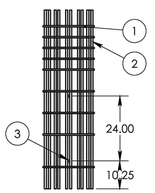
REV	DESCRIPTION	DATE	ENGINEER

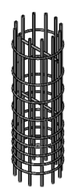












PREFAB CAGE

GROUP	SIZE	QTY	SHAPE
1.	#4(0.5)	8	Ø19.00
2.	#6(0.75)	12	66.00
3.	#6(0.75)	2	20.00

ALL REBAR SHALL HAVE A MINIMUM OF 2" CONCRETE COVER
MATERIAL :STEEL REINFORCEMENT -ASTM A615 GRADE 60

UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .06; X.XX ± .03; X.XXX ± .02; ANGLES ± 0.5°; FRACTIONS ± 1/8; SURFACE FINISH √

DRAWING COMPLIES WITH ASME Y14.5M - 1994 | INCH | MM | THIRD ANGLE PROJECTION

ASSA ABLOY
Atlas Security Products, Inc.
Rockville, MD

MATERIAL: SEE BOM			FOUNDATION REBAR LINE POST M30P1
HEAT TREATMENT		DATE CREATED: 1/13/2025	DRAWN BY: now / DESIGNED BY: now
SURFACE/FINISH		DOCUMENT ID	SCALE: 1:25 / SIZE: B
MASS: NA	VOLUME: NA	SURFACE AREA: NA	DRAWING NUMBER (ALT ID): LNABM-301-Line Bollard Rebar

DT3

SHEET 27

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

DETAILS

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

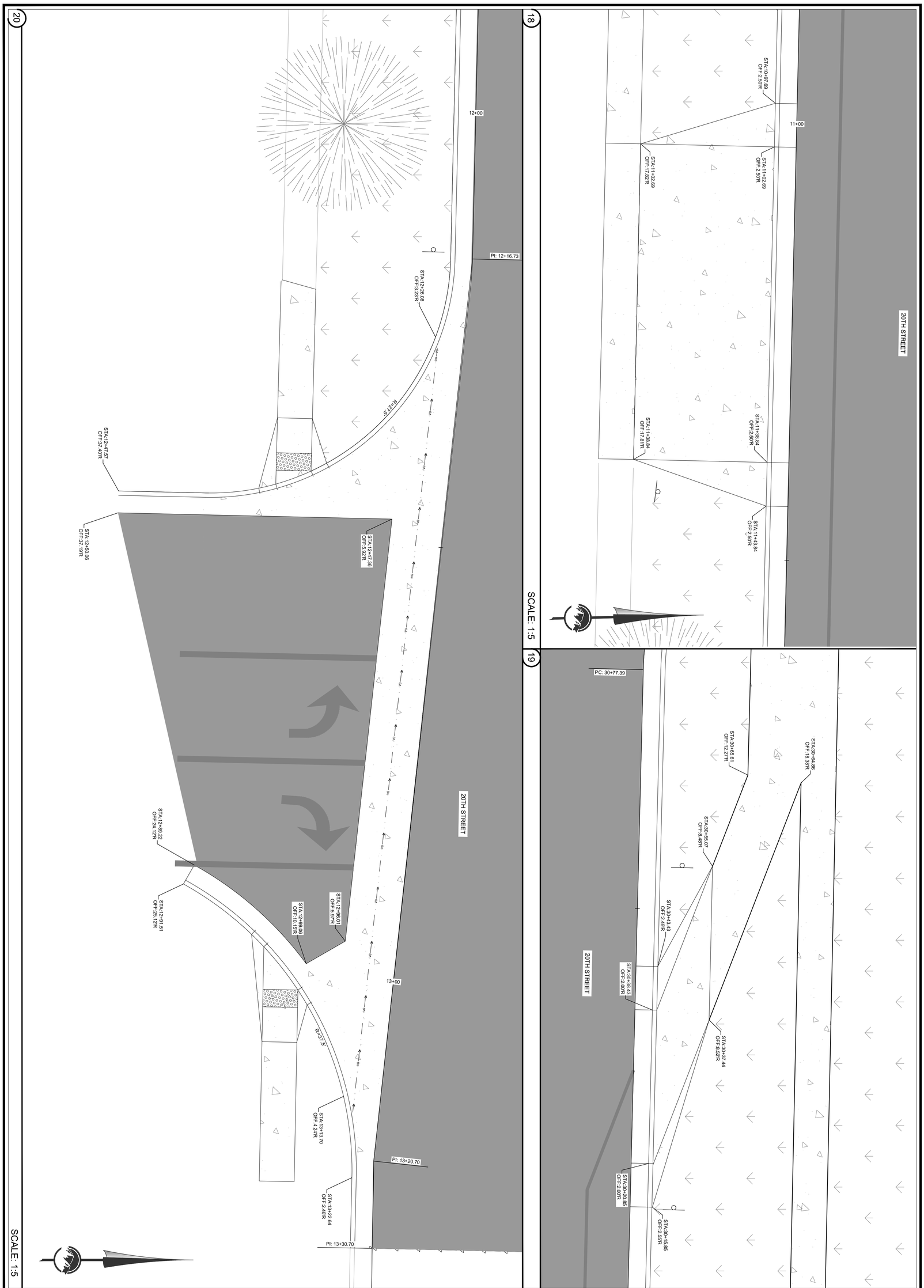
PLOT DATE: 3/11/2025 11:47 AM

DRAWING NAME: DT.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

SCALE: NTS



Kimley»Horn

111EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

DRIVE WAY DETAILS

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

DRAWING NAME: DT-INT.dwg

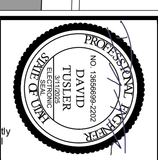
PLOT DATE: 3/11/2025 11:47 AM

DESIGNED	MSP	DATE
DRAWN	MSP	2/13/2025
CHECKED	DAT	

DRAWING SCALE

H: 1" = 5' (22x34)
1" = 2.5' (11x17)
V: None (22x34)
None (11x17)

This bar measures exactly one inch on the original drawing.



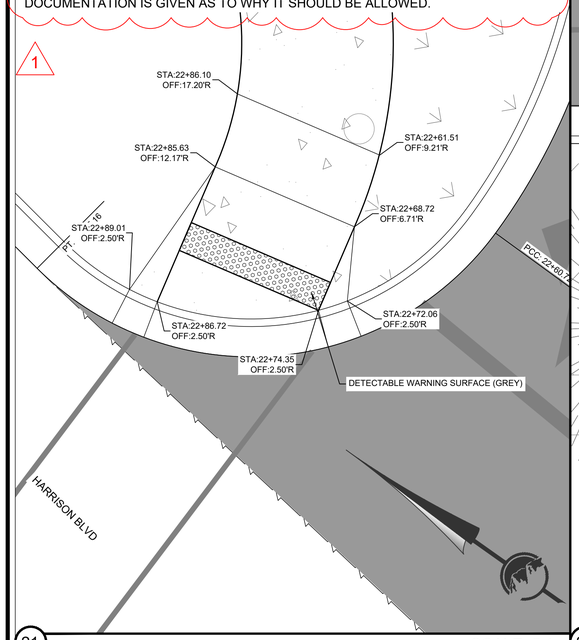
REV	DATE	DESCRIPTION

DT4

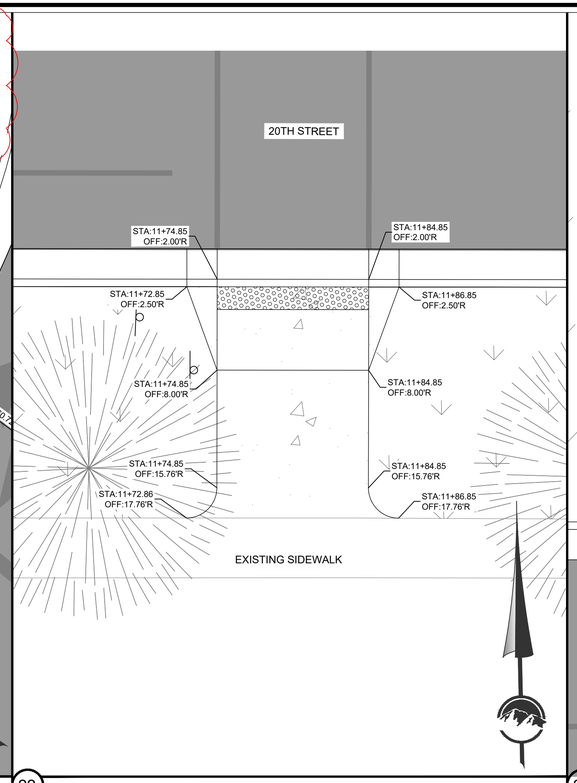
SHEET 28

0 REVISION

NOTE:
PEDESTRIAN RAMPS ARE TO MEET UDOT STANDARD AND SUPPLEMENTAL DRAWINGS PA SERIES. ANY NON-CONFORMING RAMPS WILL BE REPLACED AT NO COST TO THE DEPARTMENT. PERMIT INSPECTORS WILL SUBMIT THE REQUIRED FORMS FOR ALL IMPACTED RAMPS. REMOVE ALL CONCRETE SIDEWALK, CURB AND GUTTER TO THE NEAREST EXISTING JOINT. DUAL PARALLEL RAMP OPTIONS ARE THE FIRST STANDARD TO FOLLOW, IF CONDITIONS WILL NOT ALLOW THIS TYPE, THEN A SINGLE (APEX) RAMP OPTION MAY BE ALLOWED PROVIDED PROPER DOCUMENTATION IS GIVEN AS TO WHY IT SHOULD BE ALLOWED.



21 SCALE: 5:1



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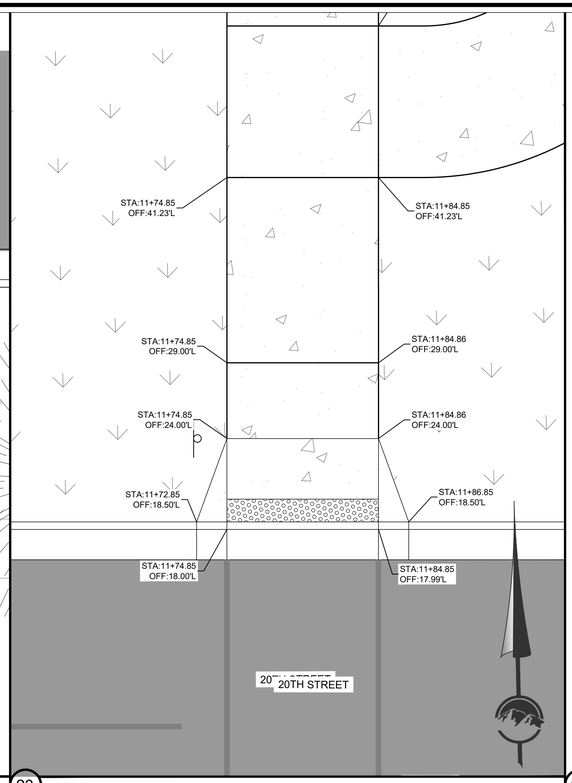

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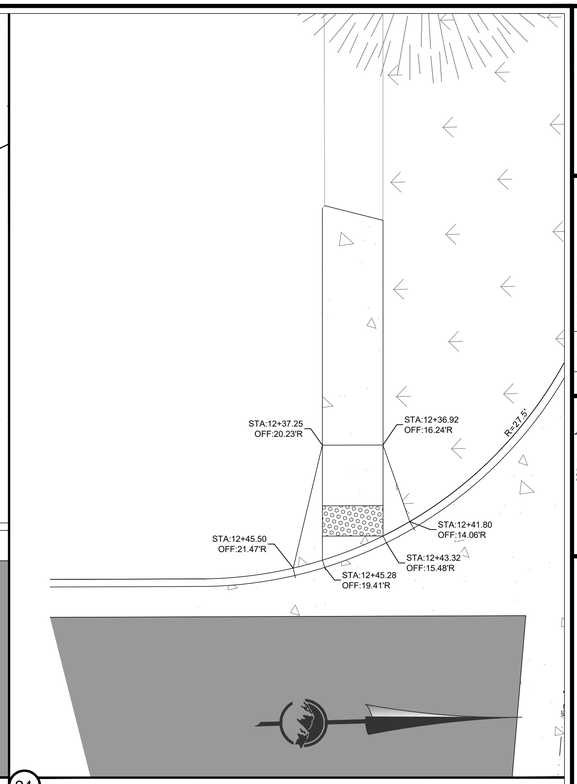
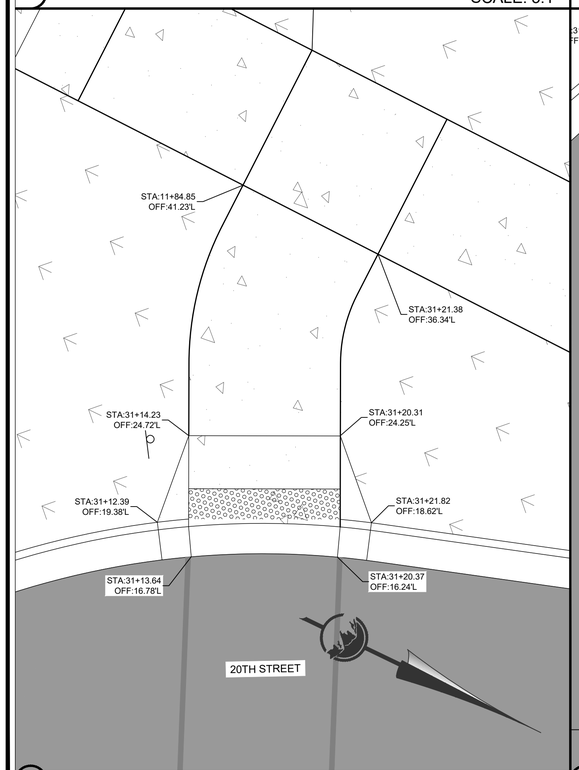
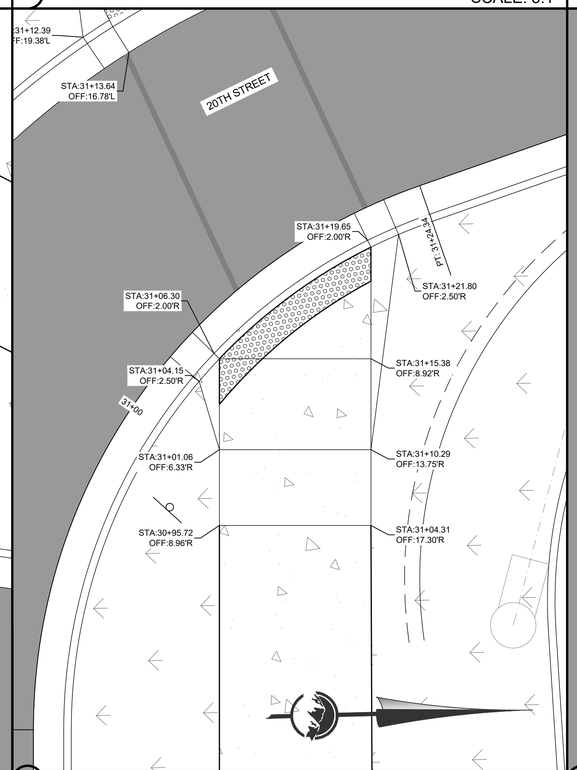


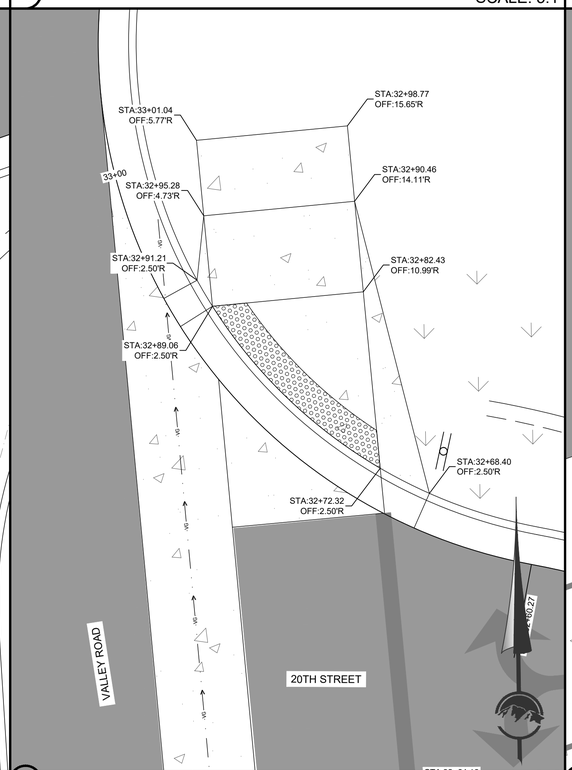
24 SCALE: 5:1



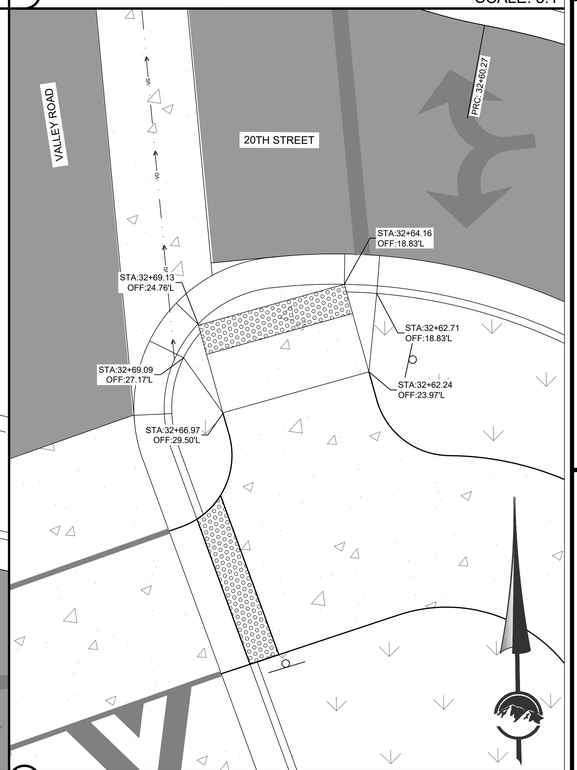
25 SCALE: 5:1



26 SCALE: 5:1



27 SCALE: 5:1



28 SCALE: 5:1

DT5

SHEET 29

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 5' (22x34) (11x17)
V: NA (22x34) NA (11x17)
This bar measures exactly one inch on the original drawing

RAMP DETAILS

20TH STREET AND VALLEY DRIVE

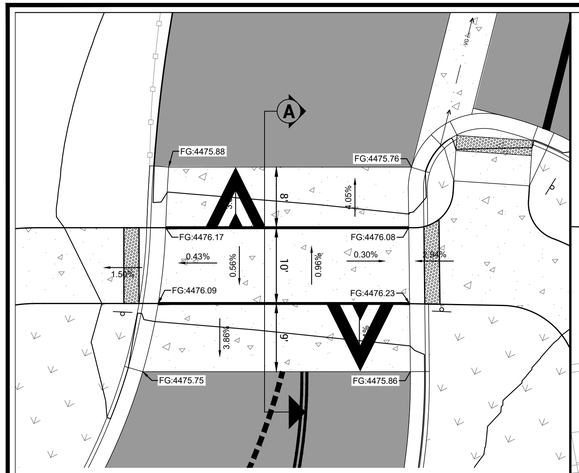
20TH STREET AND VALLEY DRIVE

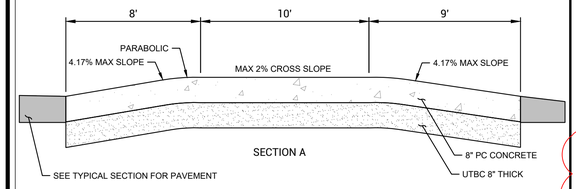
PLOT DATE: 3/11/2025 11:47 AM

DRAWING NAME: DT-INT.dwg

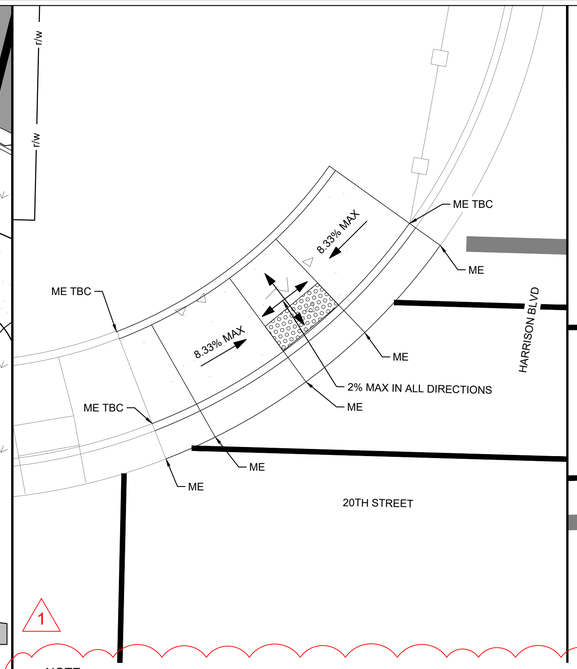
Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

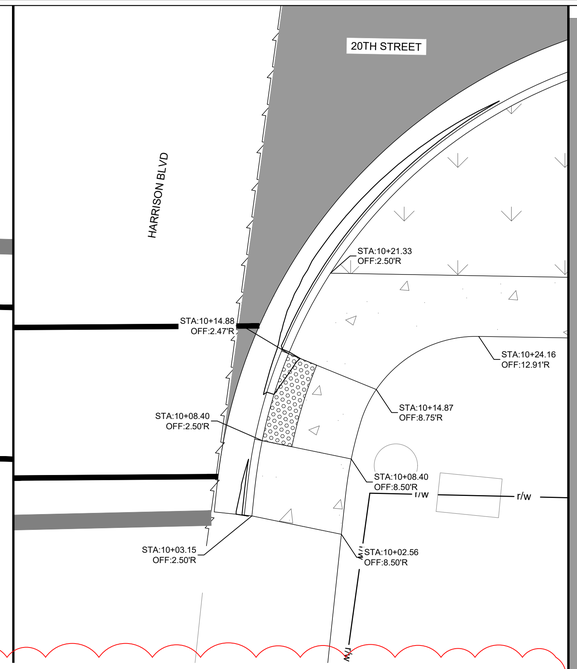




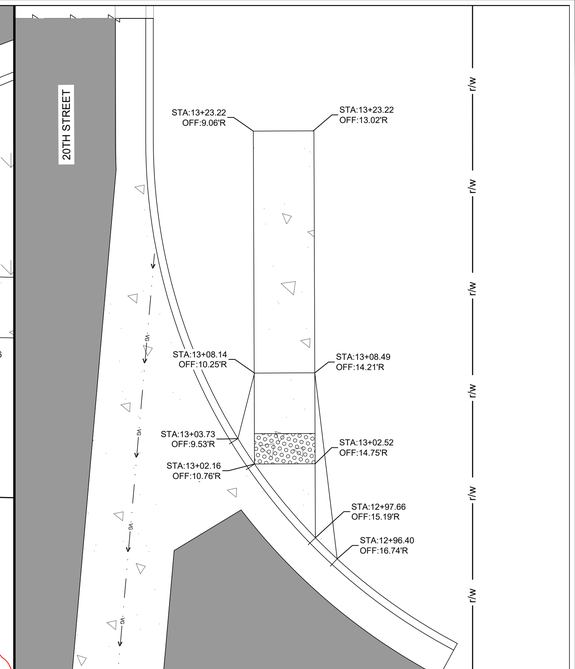
29 RAISED CROSSWALK SCALE: NTS



30 SCALE: 1" = 5'



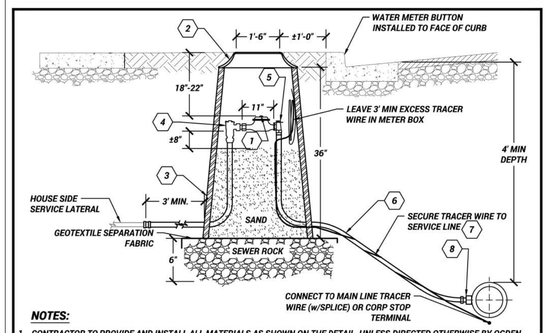
31 SCALE: 1" = 5'



32 SCALE: 1" = 5'

1

NOTE:
PEDESTRIAN RAMPS ARE TO MEET UDOT STANDARD AND SUPPLEMENTAL DRAWINGS PA SERIES. ANY NON-CONFORMING RAMPS WILL BE REPLACED AT NO COST TO THE DEPARTMENT. PERMIT INSPECTORS WILL SUBMIT THE REQUIRED FORMS FOR ALL IMPACTED RAMPS. REMOVE ALL CONCRETE SIDEWALK, CURB AND GUTTER TO THE NEAREST EXISTING JOINT. DUAL PARALLEL RAMP OPTIONS ARE THE FIRST STANDARD TO FOLLOW, IF CONDITIONS WILL NOT ALLOW THIS TYPE, THEN A SINGLE (APEX) RAMP OPTION MAY BE ALLOWED PROVIDED PROPER DOCUMENTATION IS GIVEN AS TO WHY IT SHOULD BE ALLOWED.



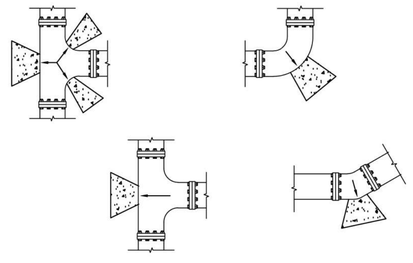
NOTES:

1. *CONTRACTOR TO PROVIDE AND INSTALL ALL MATERIALS AS SHOWN ON THE DETAIL, UNLESS DIRECTED OTHERWISE BY OGDEN CITY WATER.*
2. *METERS TO BE INSTALLED IN THE PARK STRIP, 1' BEHIND THE BACK OF CURB, OR 1' BEHIND THE SIDEWALK WHERE THE SIDEWALK IS ADJACENT TO THE CURB. DO NOT PLACE METER BOXES IN OR UNDER DRIVEWAY APPROACHES, SIDEWALKS, OR CURB AND GUTTER. IN THE CASE OF NO CURB AND GUTTER, PLACE METER WITHIN 7' OF THE PROPERTY LINE (STREET SIDE).*
3. *FILL METER BOX WITH SAND IN 8" THICK LIFTS UP TO APPROXIMATELY 8" FROM BOTTOM OF METER. TAMP SAND TO STABILIZE METER. SEPARATE SAND FROM SEWER ROCK WITH A GEOTEXTILE SEPARATION FABRIC*
4. *PROVIDE AND PLACE IMPORT BACKFILL PER APWA SECTION 33 05 20 SURROUNDING THE METER ASSEMBLY. COMPACT PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER, MODIFIED PROCTOR DENSITY. MAXIMUM LIFT THICKNESS IS 8" WHEN USING RIDING COMPACTION AND 6" WHEN USING HAND HELD COMPACTION EQUIPMENT.*
5. *ALL TRACER WIRE SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF A REPRESENTATIVE FROM OGDEN CITY WATER PRIOR TO ASPHALT PLACEMENT. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE PRIOR TO ASPHALT PLACEMENT.*
6. *ALL TRACER WIRE WILL BE RE-TESTED AT THE 1-YEAR WARRANTY INSPECTION. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.*
7. *DO NOT CONNECT THE HOUSE SIDE LATERAL DIRECTLY BENEATH THE SIDEWALK.*

ITEM	QTY	DESCRIPTION
1	1	1" OR SMALLER WATER METER (CITY PROVIDED WITH METER/TAPPING FEE)
2	1	18" FRAME AND COVER WITH RECESSED HOLE FOR ANTENNA READ WITH LARGE BOLT "LB" OPTION
3	1	RAVEN METER BOX OR APPROVED EQUAL
4	1	1" ASSE 1024 DUAL CHECK VALVE (BACKFLOW PREVENTER, TOP ENTRY ONLY)
5	1	1" BALL ANGLE VALVE - FORD BA43-444W-Q-NL, MUELLER - B-24258N
6	VARIES	1" AWWA C901 CTS POLY TUBING
7	VARIES	TRACER WIRE
8	1	CORP STOP WITH TEE-HEAD CAP ADAPTOR (TAP HORIZONTALLY)

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	TYPICAL SERVICE INSTALLATION FOR WATER METERS 1" OR SMALLER	W-3
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 | 2025

33 TYPICAL SERVICE INSTALLATION



MINIMUM BEARING AREA IN SQUARE FEET					
SIZE	TEES, VALVES, DEAD ENDS	90° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	1.5	1
8"	6	9.5	5	2.75	1.5
12"	14	20	11	5.5	3

NOTES:

1. *ALL PIPES WITHIN OGDEN CITY MUST BE RESTRAINED USING JOINT RESTRAINT DEVICES. THRUST BLOCKS ARE ONLY TO BE USED IN SITUATIONS THAT WOULD REQUIRE A THRUST BLOCK SUCH AS AT HYDRANTS AND AT CONNECTIONS TO EXISTING.*
2. *CONCRETE: CLASS 4000 MINIMUM PER APWA SECTION 03 30 04. POUR AGAINST UNDISTURBED SOIL. NO BAG MIXES ALLOWED. SANDIES OR KAPP UCART ARE ALLOWED FOR USE FOR THRUST BLOCKS.*
3. *PIPE JOINTS: DO NOT COVER WITH CONCRETE. LEAVE COMPLETELY ACCESSIBLE.*
4. *GREASE: APPLY POLY-FM GREASE TO ALL BURIED METAL SURFACES. WRAP 8 MIL THICK POLYETHYLENE SHEET AND TAPE WRAP.*
5. *SPECIAL CONSTRUCTION REQUIREMENTS:*
   - *5.1. THRUST DESIGN FOR PIPE SIZES OR CONFIGURATIONS NOT SHOWN REQUIRE A SPECIAL DESIGN.*
   - *5.2. BEARING AREAS, VOLUMES, AND SPECIAL THRUST BLOCKING DETAILS SHOWN ON CONSTRUCTION PLANS TAKE PRECEDENCE OVER THIS PLAN.*
6. *INSPECTIONS: PRIOR TO BACKFILLING AROUND THE THRUST BLOCK, SECURE INSPECTION OF INSTALLATION BY ENGINEER.*
7. *BACKFILL: PROVIDE AND PLACE PER APWA SECTION 33 05 20. COMPACT PER APWA SECTION 31 23 26 TO A DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS IS 8" WHEN USING RIDING COMPACTION AND 6" WHEN USING HANDHELD COMPACTION EQUIPMENT.*

OGDEN CITY ENGINEERING - STANDARD DRAWINGS		
Ogden UTAH Still Untamed	DIRECT BEARING THRUST BLOCK	W-16
	TAYLOR NIELSEN, CITY ENGINEER	SHEET 1 OF 1 | 2025

34 THRUST BLOCK SCALE: NTS

35 NOT USED SCALE: NTS

DT6

SHEET 30

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT

DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

DETAILS

20TH STREET AND VALLEY DRIVE

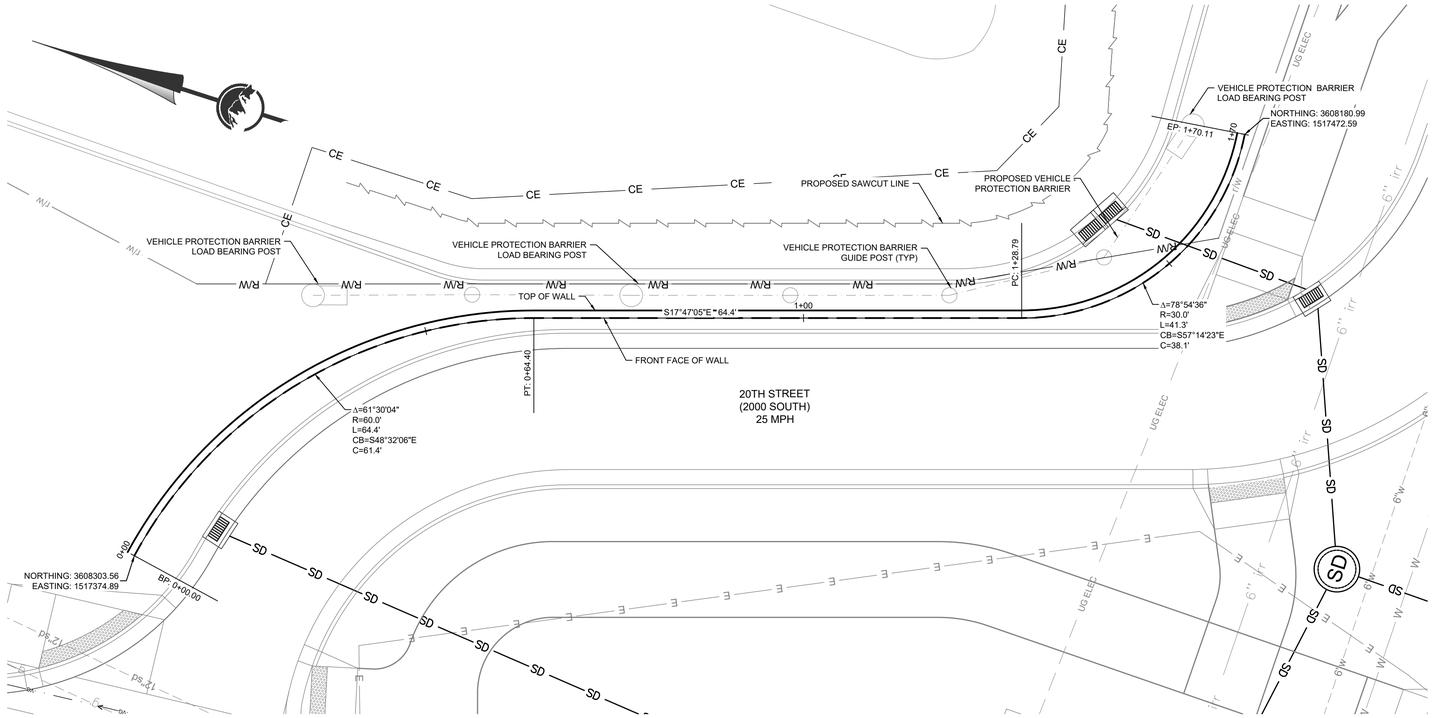
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:47 AM

DRAWING NAME: DT.dwg

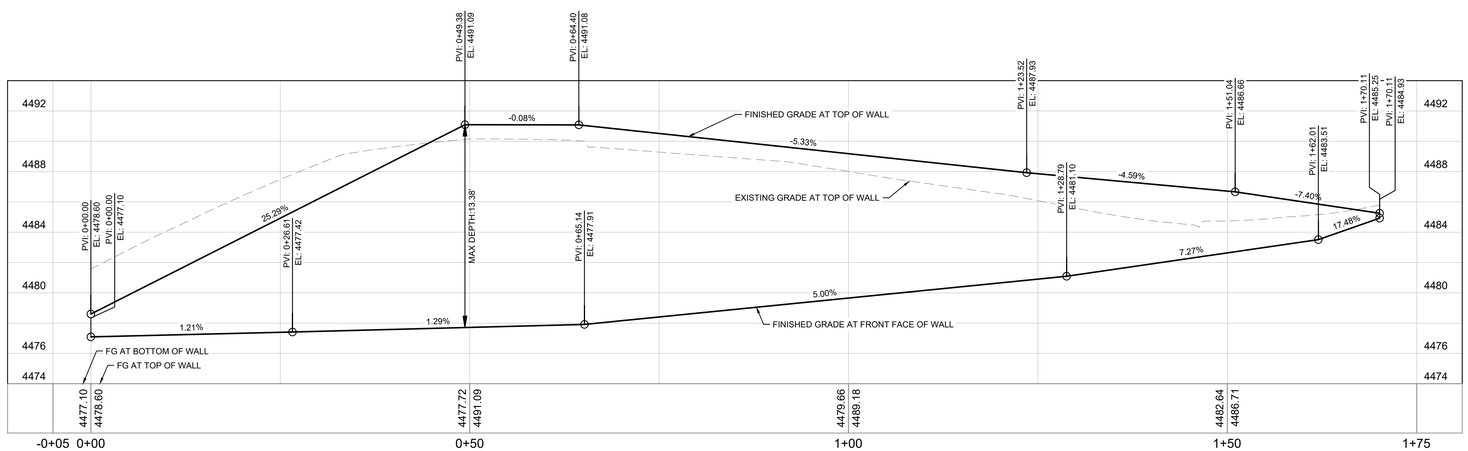
Kimley»Horn

11 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

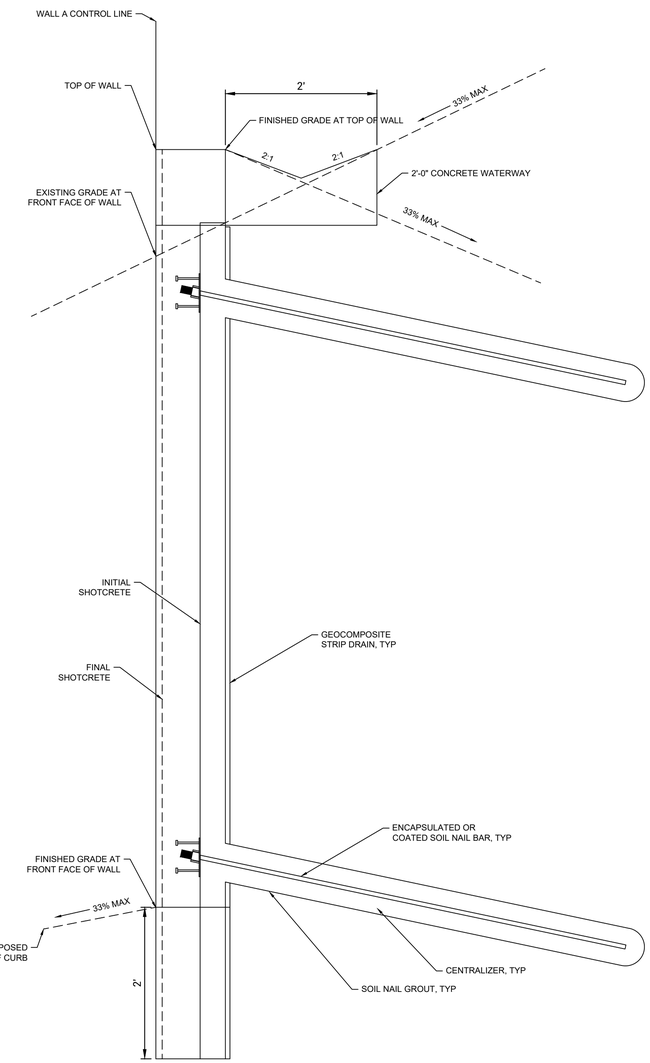


RETAINING WALL PLAN

SCALE
0 10 20



RETAINING WALL PROFILE



TYPICAL SECTION

NOTES:
1) REFER TO TECHNICAL MEMORANDUM "GEOTECHNICAL STUDY VALLEY DRIVE RETAINING WALLS" (GERHART COLE) FOR GEOTECHNICAL INFORMATION AND RECOMMENDATIONS CONCERNING SOIL NAIL WALL DESIGN.

ST1

SHEET 31

REVISION 0

REV	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 10' (22x34) 1" = 20' (11x17)
V: 1" = 5' (22x34) 1" = 10" (11x17)
This bar measures exactly one inch on the original drawing

WALL PLAN, ELEVATION AND SECTION

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM

DRAWING NAME: Wall Plan And Profile.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

SIGN SCHEDULE

SIGN NO.	MUTCD CODE	SIGN SIZE		MOUNTING (SEE UDOT STD. DWG SL3 SERIES)	MOUNTING HARDWARE	REMARKS
		LENGTH (IN)	WIDTH (IN)			
A	D3-1	72	18	OPTION C	1 X Z-BAR 4 X SIGN CLAMP 1 X GALAXY ASTRO-BRAC ARM CLAMP KIT 1 X ASTRO-BRAC ARM CLAMP KIT 4 X STAINLES STEEL TRUSS BOLTS	1 REMOVE EXISTING SIGN FROM P4. INSTALL SALVAGED SIGN ON P5 WITH NEW MOUNTING HARDWARE 1

A

1.88" Radius, 0.75" Border, White on Green;
"20th Street", C;

TRAFFIC SIGNAL NOTES

1. REMOVE EXISTING SIGNAL AND EQUIPMENT
2. RESET SALVAGED SIGN ON THE NEW MAST ARM. INSTALL NEW MOUNTING HARDWARE PER SIGN SCHEDULE
3. INSTALL NEW STOP BAR DETECTION SENSOR. CONTACT DAVE TOWNSEND AT (801) 940-0485 FOR ASSISTANCE WITH RADAR DETECTION AREA LOCATING, PROVIDE 7 DAYS NOTICE.
4. INSTALL NEW ADVANCE RADAR DETECTION SENSOR. CONTACT DAVE TOWNSEND AT (801) 940-0485 FOR ASSISTANCE WITH RADAR DETECTION AREA LOCATING, PROVIDE 7 DAYS NOTICE.
5. INSTALL STATE FURNISHED SIGNAL HEADS, BRACKETS, AND BACKPLATES WITH REFLECTORIZED TAPE. CENTER PROPOSED SIGNAL HEAD OVER RECEIVING LANE. REFER TO UDOT STANDARD DETAIL.
6. INSTALL NEW VIBRATION MITIGATOR.
7. EXISTING JUNCTION BOX. PROTECT IN PLACE
8. EXISTING JUNCTION BOX. ADJUST TO GRADE

NOTES

1. SEE SHEET SG-03 FOR LEGEND.
2. UTILITIES ARE TO BE BLUESTAKED BEFORE WORK BEGINS. VERIFY LOCATION IN FIELD AND PROTECT EXISTING UTILITIES IN PLACE. ADJUST PLACEMENT OF SIGNAL EQUIPMENT ACCORDINGLY. CONTACT KENNY BARRIER AT (801) 330-6788 BEFORE DRILLING SIGNAL POLE FOUNDATIONS.
3. INSTALL MAST ARMS PERPENDICULAR TO ROADWAY CENTERLINE.
4. REMOVE EXISTING CONDUCTORS AND CONDUIT UNLESS OTHERWISE NOTES ON THE PLANS.
5. THE CONTRACTOR SHALL PATCH ANY HOLES ON THE EXISTING SIGNAL MAST ARMS AND POLES AS A RESULT FROM THE REMOVAL OF SIGNAL EQUIPMENT WITH A UDOT/CITY APPROVED MATERIAL.
6. NEW SIGNAL MUST BE OPERATIONAL AND CONNECTED TO COMMUNICATIONS BEFORE THE EXISTING SIGNAL IS REMOVED. MAST ARMS AND SIGNAL HEADS MUST BE HUNG WITHIN 5 DAYS OF TURN ON.

POLE SCHEDULE

POLE ID	LINE	STATION	OFFSET LT	OFFSET RT	LUMINAIRE ARM LENGTH	LUMINAIRE HEIGHT	MAST ARM LENGTH	REMARKS
☒								
P1	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE
P2	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE
P3	VALLEY DRIVE	22+92.05	97.59	-	-	-	-	11' TRAFFIC POLE
P4	-	-	-	-	REMOVE	REMOVE	REMOVE	REMOVE SIGNAL POLE AND ALL EQUIPMENT
P5	VALLEY DRIVE	22+55.70	-	8.0000	15'-0"	40'-0"	70'-0"	MAST ARM SIGNAL POLE
P6	VALLEY DRIVE	22+92.42	-	7.1100	-	-	-	5.5' PED POLE
P7	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE
P8	-	-	-	-	RELOCATE	RELOCATE	RELOCATE	EXISTING PED POLE TO BE RELOCATED TO P9
P9	EB 20TH STREET	10+11.72	-	9.42	-	-	-	RELOCATED PED POLE FROM P8
P10	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE
P11	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE
P12	-	-	-	-	EXISTING	EXISTING	EXISTING	EXISTING SIGNAL POLE

SG-01

SHEET 32

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 15' (22x34) 1" = 30' (11x17)
V: NONE (22x34) NONE (11x17)
This bar measures exactly one inch on the original drawing

SIGNAL PLAN

20TH STREET AND VALLEY DRIVE

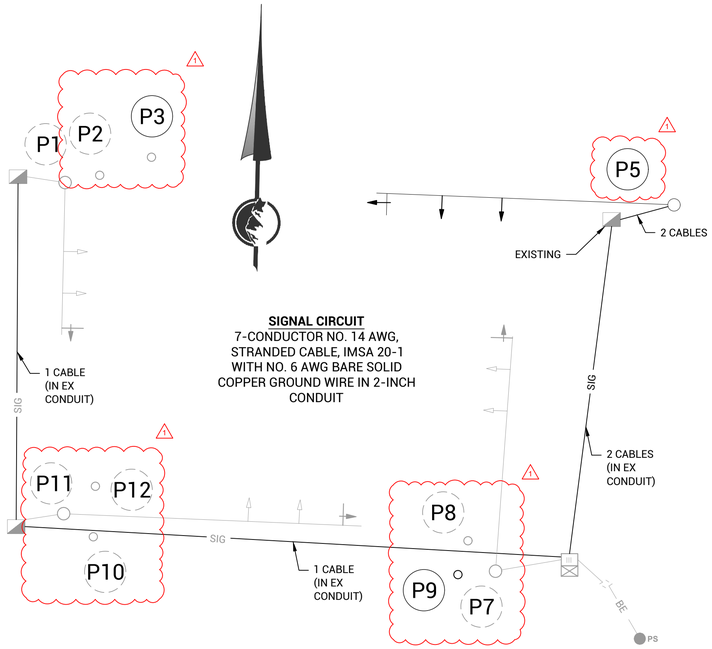
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM

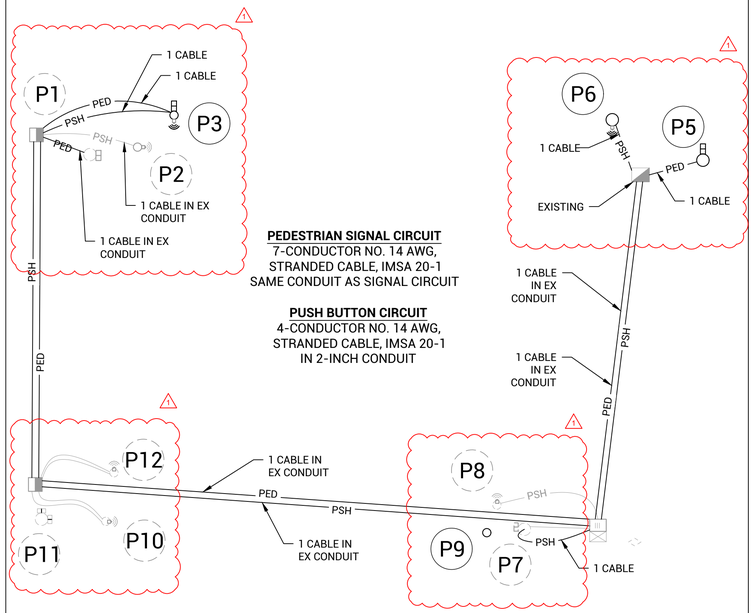
DRAWING NAME: XSignal.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

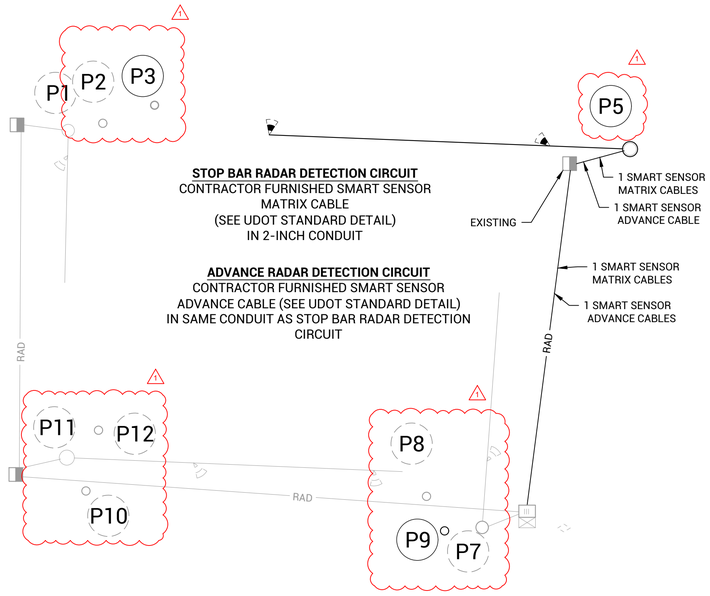


SIGNAL CIRCUIT
7-CONDUCTOR NO. 14 AWG,
STRANDED CABLE, IMSA 20-1
WITH NO. 6 AWG BARE SOLID
COPPER GROUND WIRE IN 2-INCH
CONDUIT



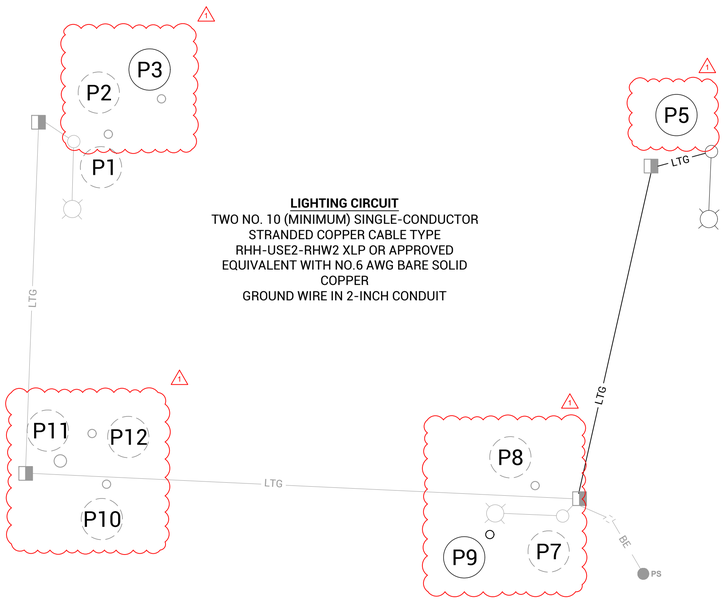
PEDESTRIAN SIGNAL CIRCUIT
7-CONDUCTOR NO. 14 AWG,
STRANDED CABLE, IMSA 20-1
SAME CONDUIT AS SIGNAL CIRCUIT

PUSH BUTTON CIRCUIT
4-CONDUCTOR NO. 14 AWG,
STRANDED CABLE, IMSA 20-1
IN 2-INCH CONDUIT



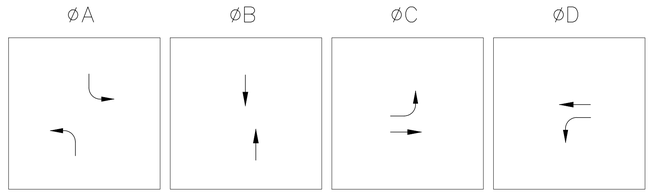
STOP BAR RADAR DETECTION CIRCUIT
CONTRACTOR FURNISHED SMART SENSOR
MATRIX CABLE
(SEE UDOT STANDARD DETAIL)
IN 2-INCH CONDUIT

ADVANCE RADAR DETECTION CIRCUIT
CONTRACTOR FURNISHED SMART SENSOR
ADVANCE CABLE (SEE UDOT STANDARD DETAIL)
IN SAME CONDUIT AS STOP BAR RADAR DETECTION
CIRCUIT



LIGHTING CIRCUIT
TWO NO. 10 (MINIMUM) SINGLE-CONDUCTOR
STRANDED COPPER CABLE TYPE
RHH-USE2-RHW2 XLP OR APPROVED
EQUIVALENT WITH NO.6 AWG BARE SOLID
COPPER
GROUND WIRE IN 2-INCH CONDUIT

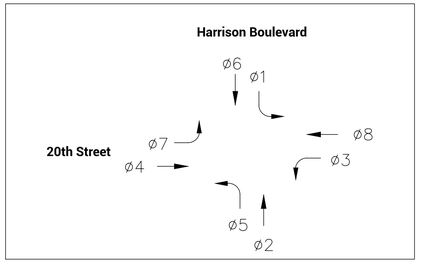
NEMA PHASE DETAIL



LEGEND

PROTECTED PHASE:

PROTECTED LEFT TURN PHASE:



SG-02

SHEET 33

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
3/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
H: 1" = 15' (22x34) 1" = 30' (11x17)
V: NONE (22x34) NONE (11x17)
This bar measures exactly one inch on the original drawing

SIGNAL CIRCUIT

20TH STREET AND VALLEY DRIVE
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM
DRAWING NAME: XSignal.dwg

Kimley»Horn

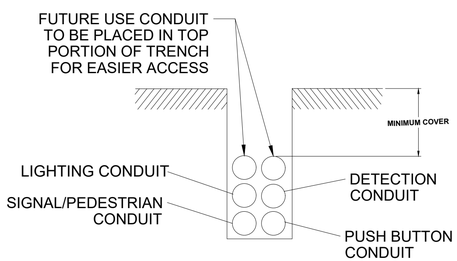
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

LEGEND

Existing	PROPOSED	
		POWER SOURCE CIRCUIT CONDUIT
		SIGNAL CIRCUIT CONDUIT
		PEDESTRIAN SIGNAL CIRCUIT CONDUIT
		PEDESTRIAN PUSH BUTTON CIRCUIT CONDUIT
		RADAR DETECTION CIRCUIT CONDUIT
		LIGHTING CIRCUIT CONDUIT
		FUTURE USE CONDUIT
P1	P1	SIGNAL POLE IDENTIFICATION
		DUAL MAST ARM SIGNAL POLE
		MAST ARM SIGNAL POLE
		SIGNAL POLE LUMINAIRE EXTENSION WITH ARM
		SIGNAL POLE LUMINAIRE EXTENSION WITH VERTICAL ATTACHMENT
		MAST ARM MOUNTED SIGN
ps	PS	POWER SOURCE
		TRAFFIC SIGNAL POLE
		TYPE 0 - 1 SECTION SIGNAL HEAD ASSEMBLY
		TYPE I - 3 SECTION SIGNAL HEAD ASSEMBLY
		TYPE II - 3 SECTION SIGNAL HEAD ASSEMBLY
		TYPE III - 3 SECTION (ALL ARROWS) SIGNAL HEAD ASSEMBLY
		TYPE IV - 4 SECTION SIGNAL HEAD ASSEMBLY
		TYPE V - 5 SECTION SIGNAL HEAD ASSEMBLY
		TYPE VI - 4 SECTION (ALL ARROWS) SIGNAL HEAD ASSEMBLY
		TYPE VII - 4 SECTION SIGNAL HEAD ASSEMBLY
		PEDESTRIAN HYBRID BEACON - 3 SECTION SIGNAL HEAD ASSEMBLY
		VIBRATION MITIGATOR
		TRAFFIC SIGNAL CONTROLLER CABINET
		TYPE A JUNCTION BOX
		TYPE B JUNCTION BOX
		TYPE C JUNCTION BOX
III-pc	III-PC	TYPE III JUNCTION BOX (ATMS)
		SAME JUNCTION BOX USED FOR SIGNAL CIRCUIT
		PEDESTRIAN SIGNAL HEAD WITH PUSH BUTTON
		AUDIBLE PEDESTRIAN SIGNAL HEAD
		AUDIBLE PUSH BUTTON
		UNDERGROUND SERVICE PEDESTAL (USP)
		PREEMPTION CONTROL SYSTEM DETECTOR
		DIRECTIONAL ANTENNA
		VIDEO DETECTION CAMERA
		CCTV CAMERA
		RADAR DETECTION, DILEMMA ZONE
		RADAR DETECTION, STOP BAR
		WIRELESS DETECTION PUCK
		WIRELESS DETECTION, ACCESS POINT
		WIRELESS DETECTION, REPEATER
		SENSOR LOOP
		RRFB (WITH INTEGRATED PEDESTRIAN CONFIRMATION PILOT LIGHT)

EXISTING EQUIPMENT

	SALVAGE																REMOVE										RELOCATE									
	TRAFFIC SIGNAL CONTROLLER	TRAFFIC SIGNAL CABINET	UNDERGROUND SERVICE PEDESTAL	MASTER ARM SIGNAL POLE	PEDESTRIAN PUSH BUTTON POLE	HIGHWAY LUMINAIRE POLE	LUMINAIRE EXTENTION	LUMINAIRE ARM	SIGNAL HEAD	COUNTDOWN PEDESTRIAN SIGNAL HEAD	LED LUMINAIRE HEAD	PEDESTRIAN PUSH BUTTON	RADAR DETECTION SENSOR	WIRELESS DETECTION ACCESS POINT	WIRELESS DETECTION PUCKS	VIBRATION MITIGATOR	SIGNAL POLE AND EQUIPMENT	TRAFFIC SIGNAL CABINET FOUNDATION	UNDERGROUND SERVICE PEDESTAL FOUNDATION	MAST ARM SIGNAL POLE FOUNDATION	PEDESTRIAN PUSH BUTTON POLE FOUNDATION	LUMINAIRE POLE FOUNDATION	MAST ARM	MAST ARM MOUNTED SIGN	JUNCTION BOX	WIRE/CABLE	ROCKY MOUNTAIN POWER POLE	TRAFFIC SIGNAL CONTROLLER CABINET	SIGNAL HEAD	COUNTDOWN PEDESTRIAN SIGNAL HEAD	LUMINAIRE EXTENSION & ARM	TREEMTION RECEIVER	MAST ARM MOUNTED SIGN	RADAR DETECTION SENSOR	OVERHEAD DEVICE ON LUMINAIRE EXTENSION	PEDESTRIAN PUSH BUTTON POLE	PEDESTRAIN PUSH BUTTON
LOCATION	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2TH STREET AND VALLEY DRIVE													2			1	2			1	1		1	1									1	1
TOTALS													2			1	2			1	1		1	1									1	1



NOTES:

1. REFER TO UDOT STANDARD DRAWINGS FOR MINIMUM CONDUIT DEPTH REQUIREMENTS.
2. MINIMUM OF 6 CONDUITS ARE REQUIRED FOR EACH ROAD CROSSING LOCATION.

TRENCHING AND BORING DETAIL

NOTES:

REGION	SIGNAL CREW CONTACT	PHONE
1	DAVID TOWNSEND	801-940-0485
2	DAVE MOUNT	801-330-4446
3	ERIC KINSMAN	801-830-9557
4	TYSON LARSON	801-830-9556

1. CONTACT REGION SIGNAL CREW TO SCHEDULE/COORDINATE ON THE FOLLOWING ITEMS:

   SALVAGED ITEMS: PROVIDE 2 DAYS NOTICE. ENSURE ALL SALVAGED ITEMS HAVE ALL PARTS AND ASSOCIATED HARDWARE.

   SIGNAL INSPECTION: 8 DAYS PRIOR TO TURN-ON CONTACT REGION SIGNAL CREW TO REQUEST AN IN-PROGRESS SIGNAL INSPECTION.

   SIGNAL TURN-ON: PROVIDE 5 DAYS NOTICE. COMPLETE UDOT TRAFFIC SIGNAL TURN-ON CHECKLIST PRIOR TO CALLING SIGNAL CREW.

2. CONTRACTOR IS RESPONSIBLE TO DISPOSE OF REMOVAL ITEMS AND ASSUME RESPONSIBILITY THEREAFTER. REUSE MATERIALS ONLY AS SPECIFIED OR AS APPROVED BY THE ENGINEER.
3. REFER TO UDOT STD DWG SL SERIES FOR DETAILS.

SG-03

SHEET 34

REVISION 0

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
8/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT

DATE 2/13/2025

DRAWING SCALE
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

This bar measures exactly one inch on the original drawing

SIGNAL SCHEDULE

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM

DRAWING NAME: XSignal.dwg

Kimley»Horn

111EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

CONTRACTOR FURNISHED MATERIALS

	STRUCTURAL SUPPORT							POWER			CONDUIT							JUNCTION BOX			SIGN				
	MAST ARM SIGNAL POLE FOUNDATION -3' X 12' (30' TO 65')	MAST ARM SIGNAL POLE FOUNDATION -3' X 14' (70' TO 75')	MAST ARM SIGNAL POLE FOUNDATION -4' X 14' (80' TO 85')	TRAFFIC SIGNAL/PED POLE FOUNDATION -2' X 3'	HIGHWAY LUMINAIRE POLE FOUNDATION -2.5' X 8'	CABINET FOUNDATION	UNDERGROUND SERVICE PEDESTAL FOUNDATION	UNDERGROUND SERVICE PEDESTAL	DUAL METER UNDERGROUND SERVICE PEDESTAL	POWER SOURCE (120 VOLT)	2" CONDUIT	2 1/2" CONDUIT	3" CONDUIT	2" CONDUIT WITH DETECTABLE PULL TAPE (FUTURE USE)	TRENCHING PAVED SURFACE	ADDITIOAL COST FOR ROCKY SOIL	DIRECTIONAL BORING	TYPE A	TYPE B	TYPE C	MAST ARM SIGNAL SIGN WITH MOUNTING BRACKETS	TRAFFIC/SIGNAL POLE MOUNTED SIGN WITH MOUNTING BRACKETS	UNIVERSAL CLAMP	ALUMINUM MEDIUM CHANNEL	BLANK OUT SIGN WITH MOUNTING BRACKETS
LOCATION	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EA	EA	EA	EA	EA	EA	EA	EA
2TH STREET AND VALLEY DRIVE		1		3							85														
TOTALS		1		3							85														

CONTRACTOR FURNISHED MATERIALS

	SIGNAL AND PEDESTRIAN							LIGHTING			GROUNDING			DETECTION		
	4 CONDUCTOR NO. 14 CABLE (SIGNAL CIRCUIT)	7 CONDUCTOR NO. 14 CABLE (SIGNAL CIRCUIT)	7 CONDUCTOR NO. 14 CABLE (PED CIRCUIT)	4 CONDUCTOR NO. 14 CABLE (PUSH BUTTON CIR)	COUNTDOWN PEDESTRIAN SIGNAL HEAD	PUSH BUTTON AND SIGN ASSEMBLY	PUSH BUTTON FRAME STAND-OFF BRACKET	NO. 4 SINGLE CONDUCTOR CABLE	NO. 6 SINGLE CONDUCTOR CABLE	NO. 10 SINGLE CONDUCTOR CABLE	GROUND ROD	NO. 6 BARE COPPER GROUND WIRE	NO. 12 STRANDED GROUND WIRE (STOP BAR DETECTION)	SMART SENSOR ADVANCE CABLE (SEE NOTE 5)	SMART SENSOR MATRIX CABLE (SEE NOTE 5)	PREEMPTION CONTROL (SEE NOTE 6)
LOCATION	LIN FT	LIN FT	LIN FT	LIN FT	EA	EA	PAIR	LIN FT	LIN FT	LIN FT	EA	LIN FT	LIN FT	LIN FT	LIN FT	EA
20TH STREET AND VALLEY DRIVE		205	635	420	2					290		370		205	205	
TOTALS		205	635	420	2					290		370		205	205	

NOTES:

1. SEE UDOT STD DWG SL SERIES AND SECTIONS 02892 AND 16530.
2. CONTACT THE SERVING POWER COMPANY A MINIMUM OF THIRTY (30) DAYS BEFORE POWER SERVICE IS REQUIRED. SEE UDOT STD DWG SL 4C FOR UNDERGROUND SERVICE PEDESTAL DETAILS. CONTACT REGION SIGNAL CREW (SEE UDOT STANDARD DETAIL FOR CONTACT INFORMATION) THREE (3) DAYS IN ADVANCE OF UNDERGROUND SERVICE PEDESTAL INSPECTION. MAKE ALL ARRANGEMENTS WITH LOCAL POWER COMPANY FOR INSTALLATION.
3. PLACE ALL CONDUIT IN SAME TRENCH OR BORE SHOT WHERE POSSIBLE.
4. CONSTRUCT SIGNAL IN A MANNER TO AVOID DAMAGE TO EXISTING UTILITIES. ASSUME RESPONSIBILITY FOR ANY UTILITY DAMAGED BY CONSTRUCTION OPERATIONS. THE PLANS SHOW BURIED UTILITY LOCATIONS IN THEIR APPROXIMATE LOCATION ONLY.
5. SMART SENSOR CABLE: COLOR-CODED, TWISTED PAIR, 6 - CONDUCTOR WIRE WITH 20 AWG FOR POWER AND 22 AWG FOR COMMUNICATION. WAVETRONIX PART # WX-SS-705 OR APPROVED EQUIVALENT.
6. SEE MANUFACTURER'S REQUIREMENTS FOR CABLE TYPE.

SG-04

SHEET 35

0 REVISION

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER
NO. 13656699-2202
DAVID TUSLER
8/11/2025
ELECTRONIC SEAL
STATE OF UTAH

DESIGNED MSP
DRAWN MSP
CHECKED DAT
DATE 2/13/2025

DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

SIGNAL SCHEDULE

20TH STREET AND VALLEY DRIVE

20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM

DRAWING NAME: XSignal.dwg

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

STATE FURNISHED MATERIALS

SIGNAL SCHEDULE

	TRAFFIC SIGNAL					POLES													MAST ARMS																SIGNS			ANCHOR BOLTS	
	CONTROLLER	M.M.U.	SIGNAL CABINET	BATTERY BACKUP (IN CABINET)	POWDER COATING	BASE PLATE ADAPTER	5' 6" TRAFFICE/PED SIGNAL POLE (SLIP BASE)	11' TRAFFICE/PED SIGNAL POLE (SLIP BASE)	15' TRAFFICE/PED SIGNAL POLE (SLIP BASE)	TYPE A MAST ARM SIGNAL POLE (30' TO 55')	TYPE B MAST ARM SIGNAL POLE (60' TO 75')	TYPE C MAST ARM SIGNAL POLE (80' TO 85')	TYPE DC 90 DEG DUAL MAST ARM POLE (30' TO 45') (NON-STOCK)	TYPE DC 180 DEG DUAL MAST ARM POLE (30' TO 45') (NON-STOCK)	TYPE DC 90 DEG DUAL MAST ARM POLE (40' TO 50') (NON-STOCK)	TYPE DC 180 DEG DUAL MAST ARM POLE (40' TO 50') (NON-STOCK)	TYPE A / B / DC / DS POLE CAP	TYPE C POLE CAP	30' CURVED MAST ARM	35' CURVED MAST ARM	40' CURVED MAST ARM	40' STRAIGHT MAST ARM (NON-STOCK)	45' CURVED MAST ARM	45' STRAIGHT MAST ARM (NON-STOCK)	50' CURVED MAST ARM	50' STRAIGHT MAST ARM (NON-STOCK)	55' CURVED MAST ARM	60' STRAIGHT MAST ARM	65' STRAIGHT MAST ARM	70' STRAIGHT MAST ARM	75' STRAIGHT MAST ARM	80' STRAIGHT MAST ARM	85' STRAIGHT MAST ARM	VIBRATION MITIGATOR	GALAXY ASTRO-BRAC, ARM CLAMP ONLY (96" CABLE)	ATRSO-BRAC GUSSETED TUBE ONLY (96" LENGTH)	SIGN CLAMP	2" X 66" ANCHOR BOLT (MAST POLES)	1" X 36" ANCHOR BOLT (TRAFFIC POLES)
LOCATION	EA	EA	EA	EA	LUMP	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2TH STREET AND VALLEY DRIVE					1		3				1																			1				1	1	1	4	4	12
TOTALS					1		3				1																			1				1	1	1	4	4	12

STATE FURNISHED MATERIALS

	HIGHWAY LIGHTING SCHEDULE															DETECTION SCHEDULE											SIGNAL HEAD SCHEDULE																		RRFB SCHEDULE								
	POLE/EXTENSIONS								ARMS				LED'S			RADAR DETECTION								AUDIBLE PED BUTTONS			LED MODULES									POLYMER SIGNAL HEADS									RECTANGULAR RAPID FLASHING BEACON								
	40' HIGHWAY LUMINAIRE POLE (SLIP BASE)	30' HIGHWAY LUMINAIRE POLE (SLIP BASE)	LUMINAIRE POLE CAP	25' LUMINAIRE EXTENSION (2' 6") (FOR TYPE A MAST POLE)	30' LUMINAIRE EXTENSION (7' 6") (FOR TYPE A MAST POLE)	40' LUMINAIRE EXTENSION (17' 6") (FOR TYPE A MAST POLE)	40' LUMINAIRE EXTENSION (12' 6") (FOR TYPE B MAST POLE)	VERTICAL LUMINAIRE EXTENSION	10' LUMINAIRE ARM	15' LUMINAIRE ARM	10' DUAL LUMINAIRE ARM (NON-STOCK)	15' DUAL LUMINAIRE ARM	MULTI-VOLT/TYPE-A (250W)	MULTI-VOLT/TYPE-B (400W)	UNDER MAST ARM LIGHTING LET LUMINAIRE	ADVANCE RADAR SENSOR (DILEMMA ZONE)	STOP BAR RADAR SENSOR (MATRIX)	SENSOR MOUNT	100' CABLE W-CONNECTOR	120' CABLE W-CONNECTOR	EPOXY SPLICE KIT	ARC6 RADAR INTERFACE (4 SURGE CARDS)	ARC6 RADAR INTERFACE (6 SURGE CARDS)	2-WIRE AUDIBLE PED BUTTON	2-WIRE CENTRAL CONTROL UNIT	4-WIRE AUDIBLE PED BUTTON (FOR 1 OR 2 CROSSINGS)	RED BALL	YELLOW BALL	GREEN BALL	RED ARROW	YELLOW ARROW	GREEN ARROW	RED BICYCLE BALL	YELLOW BICYCLE BALL	GREEN BICYCLE BALL	1-SECTION SIGNAL HEAD	3-SECTION SIGNAL HEAD	4-SECTION SIGNAL HEAD	5-SECTION SIGNAL HEAD	PEDESTRIAN HYBRID BEACON SIGNAL HEAD (PHB/HAWK)	TYPE-7 SIGNAL HEAD (DUAL-RED)	3-SECTION ASTRO-BRAC ASSEMBLY	4/5 SECTION ASTRO-BRAC ASSEMBLY	MAST ARM EXTENTION KIT	LED BEACON	AC CONTROLLER	SOLAR CONTROLLER	SOLAR PANEL ASSEMBLY	MOUNTAIN KIT FOR SIDE-OF-POLE SOLAR PANEL ASSEMBLY	MOUNTING KIT FOR TOP-OF-POLE SOLAR PANEL ASSEMBLY	OERHEAD LIGHTING AC RELAY KIT	OVERHEAD LIGHTING AS LET LIGHT FIXTURE	OVERHEAD LIGHTING 9' TENON SIDE-OF-POLE-MOUNT
LOCATION	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2TH STREET AND VALLEY DRIVE							1			1				1		1	1	2	1	1	2			3			2	2	2	1	1	1					3					3											
TOTALS							1			1				1		1	1	2	1	1	2			3			2	2	2	1	1	1					3					3											

NOTES:

1. NOTIFY RESIDENT ENGINEER 4-6 WEEKS PRIOR TO THE DATE STATE FURNISHED MATERIALS ARE NEEDED.
2. PICK UP STATE FURNISHED CONTROLLER CABINET AND CONTROLLER EQUIPMENT AT THE REGION SIGNAL LAB. CONTACT REGION SIGNAL CREW, 10 DAYS PRIOR TO DESIRED PICK UP DATE. SEE SG-S01 FOR CONTACT INFORMATION.
3. PICK UP STATE FURNISHED ANCHOR BOLTS, SIGNAL POLE STEEL, AND OTHER ELECTRONICS HARDWARE AT STATE WAREHOUSE. PROVIDE LOADING EQUIPMENT AND PERSONNEL FOR PICK-UP. CONTACT DAVE TOWNSEND AT (801) 940-0485 , TO SCHEDULE PICK-UP. MINIMUM 48 HOURS ADVANCE NOTICE REQUIRED.
4. POLYMER SIGNAL HEAD ASSEMBLIES INCLUDE SIGNAL HEAD HOUSING, VISORS, AND LOUVERED BACK PLATE WITH RETROREFLECTIVE TAPE WHEN APPLICABLE.

SG-05

REVISION 0

SHEET 36

REV	DATE	DESCRIPTION
1	3/11/25	ADDENDUM 1

PROFESSIONAL ENGINEER NO. 13656699-2202 DAVID TUSLER 3/11/2025 ELECTRONIC SEAL STATE OF UTAH

DESIGNED ▶ MSP
DRAWN ▶ MSP
CHECKED ▶ DAT
DATE 2/13/2025

DRAWING SCALE
H: NONE (22x34) NONE (11x17)
V: NONE (22x34) NONE (11x17)

This bar measures exactly one inch on the original drawing

SIGNAL SCHEDULE

20TH STREET AND VALLEY DRIVE

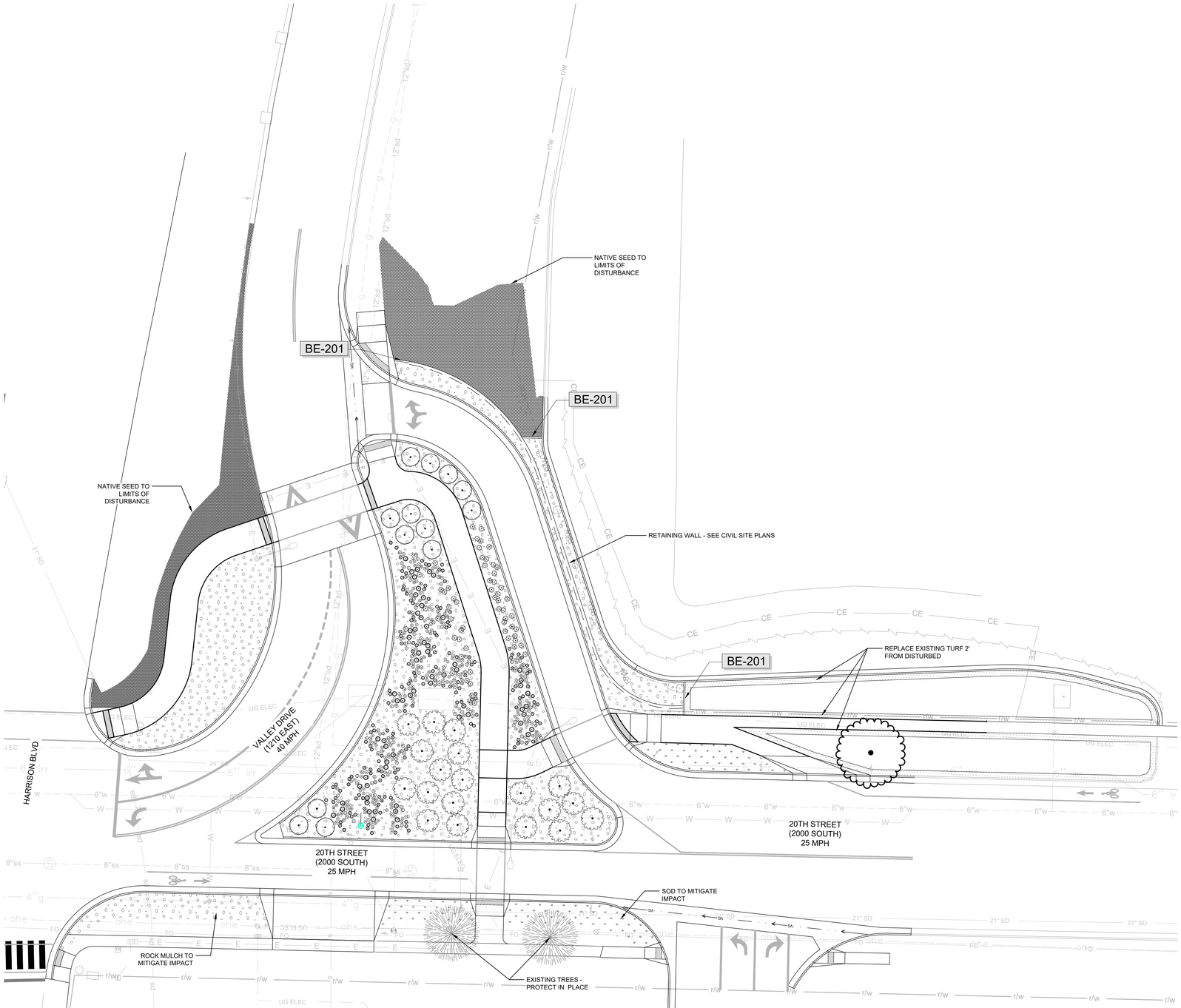
20TH STREET AND VALLEY DRIVE

PLOT DATE: 3/11/2025 11:48 AM

DRAWING NAME: XSignal.dwg

Kimley»Horn

111EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	CALIPER	HEIGHT	QTY
SHADE TREES				
	Zelkova serrata 'Green Vase' Green Vase Japanese Zelkova	2" CAL	B&B	1

SYMBOL	BOTANICAL / COMMON NAME	CONT	SIZE	QTY
SHRUBS				
	Festuca glauca 'Elijah Blue' Elijah Blue Fescue	1 gal.		159
	Juniperus horizontalis 'Wiltonii' Blue Rug Creeping Juniper	1 gal.		13
	Nepeta racemosa 'Blue Wonder' Blue Wonder Catmint	1 gal.		60
	Pennisetum alopecuroides 'Little Bunny' Little Bunny Fountain Grass	1 gal.		65
	Penstemon pinifolius Pineleaf Penstemon	1 gal.		142
	Rhus trilobata 'Autumn Amber' Autumn Amber Sumac	1 gal.		19
	Tetraneuris acaulis arizonica 'Sol Dancer' Sol Dancer Daisy	1 gal.		152

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY
GROUND COVERS			
	Native Grass Mix To match existing - see specifiaction	---	3,273 sf
	Turf Sod Bluegrass to match existing	---	1,174 sf
	Turf to Remain Replace disturbed sod	---	1,305 sf

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY
CONCRETE		
BE-201	6" Concrete Edge	25 lf
MULCH		
	Rock Mulch - 4" Depth, Staker Nephi Crushed, 1 1/2", to match existing	9,536 sf

NOTE:
PLANTS IDENTIFIED IN SHRUB LIST ARE ALL UNDER 18" HEIGHT AT MATURITY PER KNOWN SPECIES INFORMATION.

SCALE
HORIZ 0 20 40
VERT 0 5 10

LP1
SHEET 37
REVISION 0

REV	DATE	DESCRIPTION

STATE OF UTAH
CHRISTOPHER M ROSE
9112943-5501
LICENSED LANDSCAPE ARCHITECT
3/11/2025

DESIGNED LTE
DRAWN TSL
CHECKED CMR
DATE

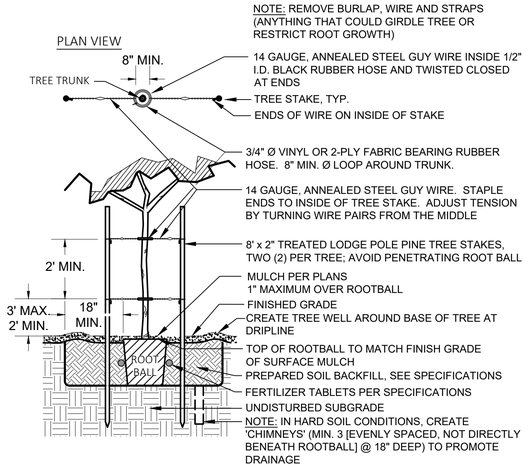
DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

LANDSCAPE PLAN

PLOT DATE 3/11/2025 11:49 AM
DRAWING NAME LS.dwg

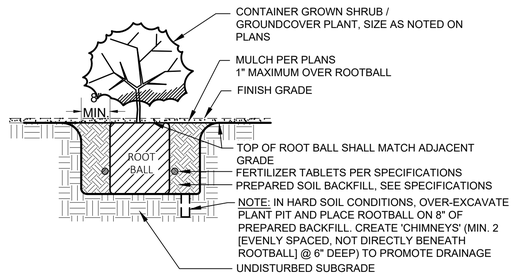
Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



1 TREE PLANTING AND STAKING

N.T.S. KHA-GP-01



2 SHRUB / GROUND COVER PLANTING

N.T.S. KHA-GP-03

3 6" CONCRETE MOW STRIP

N.T.S. KHA-GP-04

NOTE
1. COMPACT SUBGRADE TO 80% AND INSTALL WEED FILTER FABRIC PRIOR TO INSTALLATION OF MULCH AT REQUIRED DEPTH. KEEP TOP OF MULCH 1" BELOW ADJACENT WALKS, CURBS, OR OTHER HARD SURFACES.
2. MULCH SHALL BE INSTALLED SO WEED FILTER FABRIC IS NOT VISIBLE.

4 ROCK MULCH INSTALLATION

N.T.S. KHA-GP-06

NATIVE SEEDING MIX SPECIFICATION

NATIVE SEED APPLICATION SHALL BE PER SUPPLIER'S SPECIFICATIONS.

Species Name		Drill Seed		Broadcast Seed	
Botanical	Common	LBS pure live seed per acre	Percent of Mix	LBS pure live seed per acre	Percent of Mix
Agropyron cristatum 'Roadcrest'	Roadcrest Wheatgrass	3.00	15.51%	4.50	15.51%
Elymus wawawaiensis	Snake River Wheatgrass	4.00	9.36%	6.00	9.36%
Festuca ovina 'Covar'	Covar Sheep Fescue	2.50	33.14%	3.75	33.14%
Poa secunda sp. Sandbergii 'High Plains'	High Plains Sandberg Bluegrass	1.50	27.05%	2.25	27.05%
Thinopyrum intermedium 'Tegmar'	Tegmar Intermediate Wheatgrass	4.50	7.72%	6.75	7.72%
Linum lewisii 'Maple Grove'	Maple Grove Blue Flax	1.00	3.31%	1.50	3.31%
Penstemon eatonii 'Richfield'	Richfield Firecracker Penstemon	0.50	3.90%	0.75	3.90%
	TOTAL	**17.0**	100%	**25.50**	100%

ADPATED FROM THE *Utah Department of Transportation (UDOT)* roadside seed specification

GENERAL NOTES AND GUIDELINES PROVIDED BELOW FOR REFERENCE ONLY:

PERENNIAL MIXES PERFORM BEST WHEN PLANTED IN SPRING, EARLY SUMMER OR LATE FALL. PLANT LATE ENOUGH IN THE FALL THAT SEED REMAINS DORMANT AND DOES NOT GERMINATE UNTIL SPRING. PERENNIALS CAN BE PLANTED IN EARLY FALL IF THERE ARE AT LEAST 10-12 WEEKS OF GROWING TIME BEFORE THE PLANTS GO INTO WINTER DORMANCY. IN MILD CLIMATES PLANT DURING COOLER MONTHS FOR BEST RESULTS.

SITE PREPARATION:
FOR BEST RESULTS PLANT ON CLEARED GROUND. REMOVE ALL WEEDS, GRASSES AND EXISTING VEGETATION BEFORE PLANTING. LOOSEN COMPACTED SOIL BY SCRAPING, TILLING, OR SCARIFYING. TILLING SHOULD BE UTILIZED ONLY WHEN SOIL IS VERY COMPACT. IF SOIL IS TILLED, TAKE CARE NOT TO PLANT SEEDS DEEPER THAN 1/4 INCH.

PLANTING DEPTH (BROADCAST):
RAKE SEEDS IN LIGHTLY, COVERING THEM NO MORE THAN 2-3 TIMES THEIR THICKNESS. SOME SEEDS WILL SHOW ON THE SURFACE. EXCESSIVE COVER MAY RESULT IN POOR GERMINATION.

MOISTURE:
PLANTED AREAS MUST BE KEPT CONSISTENTLY MOIST FOR 4-6 WEEKS DURING THE GROWING SEASON UNTIL SEEDLINGS ARE WELL ESTABLISHED. DURING THIS PERIOD, DAILY WATERING MAY BE NECESSARY IF RAINFALL IS INADEQUATE. THEREAFTER, WATERING SHOULD BE GRADUALLY REDUCED.

MAINTENANCE:
WEED CONTROL: MONTHLY WEED CONTROL IS ESSENTIAL TO A HEALTHY AND SATISFYING SEED STAND WEEDS SHOULD BE ELIMINATED AS SOON AS THEY CAN BE RECOGNIZED EITHER BY PULLING, SPOT-SPRAYING WITH A GENERAL HERBICIDE, OR SELECTIVE CUTTING WITH A STRING TRIMMER.

FERTILIZATION: FERTILIZERS ARE USUALLY NOT NECESSARY FOR SEED PLANTINGS. IF SOIL FERTILITY IS VERY LOW, HOWEVER, A LOW NITROGEN FERTILIZER CAN BE USED. ORGANIC MATTER SUCH AS COMPOST. IF YOU SUSPECT A PROBLEM WITH SOIL FERTILITY, WE RECOMMEND A SOIL TEST AND.OR PLANT TISSUE ANALYSIS.

SUPPLEMENTAL WATERING: WATERING IS CRITICAL TO SEED MAINTENANCE. IN MOIST CLIMATES, REGULAR RAINFALL MAY MAKE SUPPLEMENTAL WATERING UNNECESSARY. IN ARID CLIMATES OR DURING DROUGHT CONDITIONS, UP TO 1/2 INCH OF SUPPLEMENTAL WATER PER WEEK MAY BE REQUIRED TO MAINTAIN AN OPTIMAL DISPLAY.

RESEEDING: TO OVERCOME THINING OVER TIME, IT IS BEST TO RESEED ANNUALS EVERY YEAR BUT NO LONGER THAN 5 YEARS. IN THE FALL REMOVE DEAD SEE STALKS AND EXCESSIVE PLANT MATERIAL BY MOWING OR CUTTING TO A HEIGHT OF FOUR TO SIX INCHES. PERENNIAL PLANTINGS CAN BE RESEEDED IF THERE ARE BARE SPOTS IN THE AREA. SPRING RESEEDING SHOULD BE COMPLETED AS SOON AS THE GROUND IS WORKABLE.

FALL MOWING AND CLEANUP: FOR A NEAT APPEARANCE, MOW SEED TO A HEIGHT OF FOUR TO SIX INCHES AFTER THEY HAVE "GONE TO SEED."

LP2

SHEET 38

0 REVISION

REV | DATE | DESCRIPTION

STATE OF UTAH — LICENSED LANDSCAPE ARCHITECT — CHRISTOPHER M ROSE — 9112943-5501 — 3/7/2025

DESIGNED LTE | DRAWN TSL | CHECKED CMR | DATE

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)
This bar measures exactly one inch on the original drawing

LANDSCAPE DETAILS

PLOT DATE: 3/11/2025 11:49 AM

DRAWING NAME: LS.dwg

Kimley»Horn
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176

GENERAL LANDSCAPE SPECIFICATIONS

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BEST MANAGEMENT PRACTICES (BMP) DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MAINTENANCE OF TRAFFIC (MOT) THAT MAY BE REQUIRED FOR THE PROJECT.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR: REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

C. PROTECTION OF EXISTING PLANT MATERIALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF FOUR HUNDRED DOLLARS ($400) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

D. MATERIALS

1. GENERAL

   MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

   a. FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN ON DRAWINGS AND COMPLYING WITH ANSI Z60.1, AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.

   b. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE.

   c. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE PROJECT LANDSCAPE ARCHITECT. ANY ROW TREES MUST BE APPROVED BY OFFICE OF THE CITY FORESTER.

   d. PROVIDE PLANTS OF SIZES, GRADES, AND BALL OR CONTAINER SIZES COMPLYING WITH ANSI Z60.1. PLANTS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO PROJECT LANDSCAPE ARCHITECT WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.

   e. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

   f. TREES WITH DAMAGED, CROOKED, OR MULTIPLE LEADERS; TIGHT VERTICAL BRANCHES WHERE BARK IS SQUEEZED BETWEEN TWO BRANCHES OR BETWEEN BRANCH AND TRUNK ("INCLUDED BARK"); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN ¾ INCH (19 MM) IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE REJECTED.

   g. FURNISH TREES AND SHRUBS WITH ROOTS BALLS MEASURED FROM TOP OF ROOT BALL, WHICH SHALL BEGIN AT ROOT FLARE ACCORDING TO ANSI Z60.1. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.

   h. LABEL AT LEAST ONE PLANT OF EACH VARIETY, SIZE, AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF COMMON NAME AND FULL SCIENTIFIC NAME, INCLUDING GENUS AND SPECIES. INCLUDE NOMENCLATURE FOR HYBRID, VARIETY, OR CULTIVAR, IF APPLICABLE FOR THE PLANT AS SHOWN ON DRAWINGS.

   i. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF PLANTS IS SHOWN ON DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND NUMBER THE LABELS TO ASSURE SYMMETRY IN PLANTING.

E. SOIL MIXTURE

1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:

2. SOIL MIXTURE SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

   a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT OPENINGS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER, HAVE A PH BETWEEN 5.5 AND 8.0, AND SOLUBLE SALTS LESS THAN 3.0 MMHOS/CM. SUBMIT SOIL SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

   b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.

3. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT THE PROJECT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

F. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

   *WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO JURISDICTIONAL AUTHORITY.

G. FERTILIZER

1. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

   * FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF FOUR (4) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE) OR AS SHOWN IN PLANTING DETAILS. UNLESS OTHERWISE NOTED ON PLANS, MULCH SHALL BE DOUBLE SHREDDED HARDWOOD MULCH DARK BROWN FINES. DYED MULCH IS NOT ACCEPTABLE. SUBMIT SAMPLES TO PROJECT LANDSCAPE ARCHITECT FOR APPROVAL. MULCH SHALL BE PROVIDED OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE RING (6' MINIMUM) PLANTED UNDER THIS CONTRACT, AS WELL AS FOR ANY EXISTING LANDSCAPE AREAS AS SHOWN ON PLANS.

I. DIGGING AND HANDLING

1. ALL TREES SPECIFIED SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE APPROVED BY PROJECT LANDSCAPE ARCHITECT.

2. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

3. B&B, AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.

K. MATERIALS LIST

1. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE PLANS SHALL GOVERN. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

L. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH.

3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

M. PLANTING PROCEDURES

1. THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, BUILDING MATERIALS, AND TOXIC MATERIAL SHALL BE COMPLETELY REMOVED FROM PLANTING AREAS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS IN PLANTING AREAS WHICH WILL ADVERSELY AFFECT THE PLANT GROWTH, THE CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL COLORADO (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.

4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE SHALL BE EXERCISED.

6. WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

7. ALL PLANTING OPENINGS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 AMERICAN STANDARD FOR NURSERY STOCK.

8. TEST ALL TREE OPENINGS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL.

9. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMEN.

10. PRIOR TO EXCAVATION OF TREE OPENINGS, AN AREA EQUAL TO TWO TIMES THE DIAMETER OF THE ROOT BALL SHALL BE ROTO-TILLED TO A DEPTH EQUAL TO THE DEPTH OF THE ROOT BALL.

11. EXCAVATION OF TREE OPENINGS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

12. IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTO-TILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF ONE FOOT BEYOND THE DIAMETER OF A SINGLE ROOT BALL. THE BED SHALL BE TILLED TO A DEPTH EQUAL TO THE ROOT BALL DEPTH PLUS 6".

13. TREE OPENINGS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL WILL BE FLUSH WITH FINISH GRADE. IN POORLY DRAINED SOILS THE TREE OPENING SHALL BE DUG SO THAT THE ROOT BALL RESTS ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL IS 1" ABOVE FINISH GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.

14. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

15. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 'E'.

16. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

17. AMEND PINE AND OAK PLANT OPENINGS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT OPENINGS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.

18. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET, ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE.

19. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.,, SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.

20. TREES SHALL BE PRUNED, IN ACCORDANCE WITH ANSI A-300, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST.

21. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

22. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

23. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S RECOMMENDATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

N. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

   a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

   b. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE

   a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK, INCLUDING REGRADING IF NECESSARY.

   b. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

O. EDGING

1. CONTRACTOR SHALL INSTALL 4"X⅛" ROLLED TOP STEEL EDGING BETWEEN ALL SOD/SEED AREAS AND PLANTING BEDS.

P. CLEANUP

1. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM CONTRACTORS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

Q. PLANT MATERIAL MAINTENANCE

1. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, PRUNING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

R. FINAL INSPECTION AND ACCEPTANCE OF WORK

1. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

S. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.

3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH.

LP3

SHEET 39

0 REVISION

REV	DATE	DESCRIPTION

STATE OF UTAH — CHRISTOPHER M ROSE — 9112943-5501 — 3/7/2025 — LICENSED LANDSCAPE ARCHITECT

DESIGNED LTE | DRAWN TSL | CHECKED CMR | DATE

DRAWING SCALE — H: 1" = 20' (22x34), 1" = 40' (11x17) — V: 1" = 10' (22x34), 1" = 20' (11x17)

This bar measures exactly one inch on the original drawing

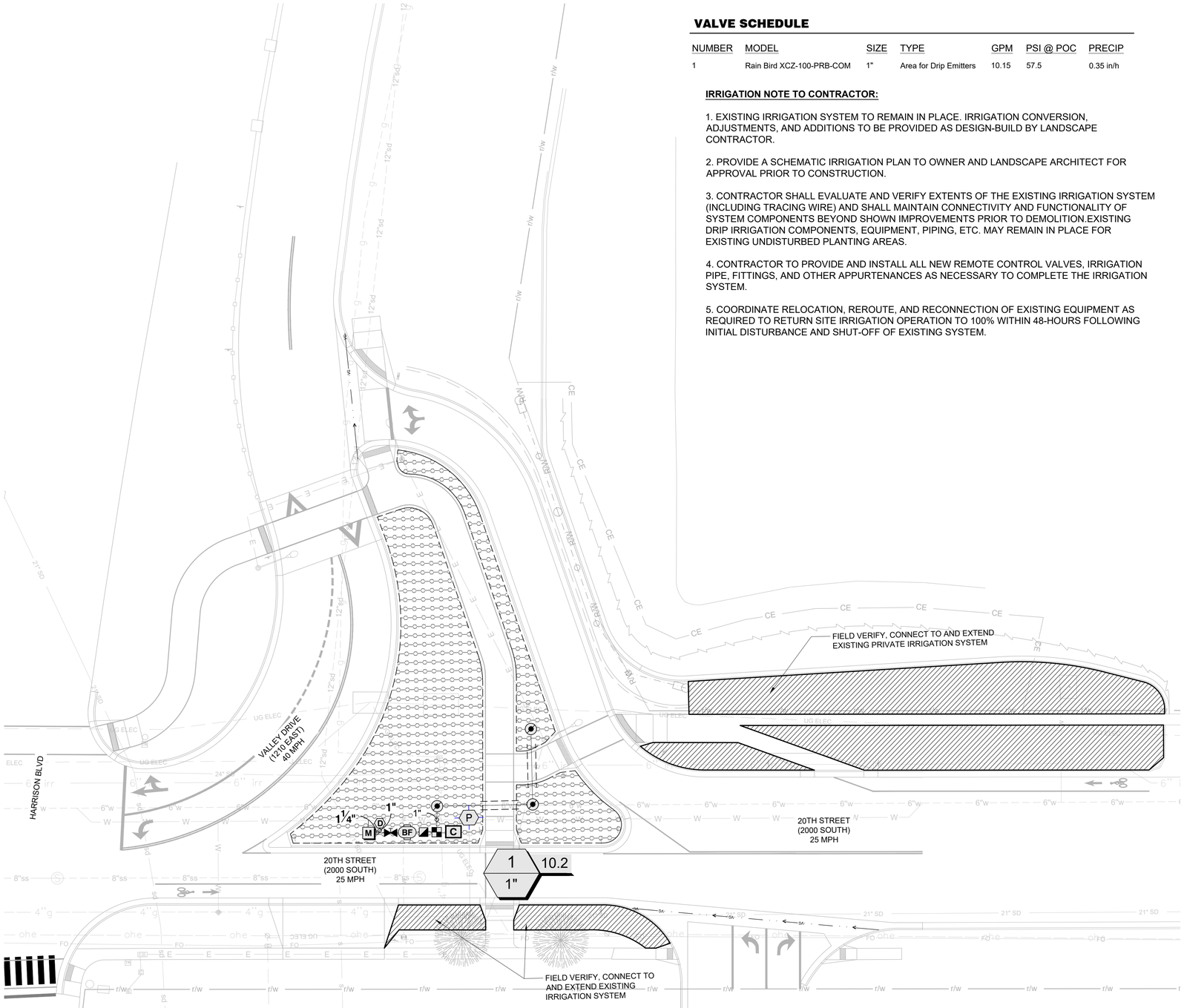
LANDSCAPE SPECIFICATION

PLOT DATE: 3/11/2025 11:49 AM

DRAWING NAME: LS.dwg

Kimley»Horn

11 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI @ POC	PRECIP
1	Rain Bird XCZ-100-PRB-COM	1"	Area for Drip Emitters	10.15	57.5	0.35 in/h

IRRIGATION NOTE TO CONTRACTOR:

1. EXISTING IRRIGATION SYSTEM TO REMAIN IN PLACE. IRRIGATION CONVERSION, ADJUSTMENTS, AND ADDITIONS TO BE PROVIDED AS DESIGN-BUILD BY LANDSCAPE CONTRACTOR.

2. PROVIDE A SCHEMATIC IRRIGATION PLAN TO OWNER AND LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.

3. CONTRACTOR SHALL EVALUATE AND VERIFY EXTENTS OF THE EXISTING IRRIGATION SYSTEM (INCLUDING TRACING WIRE) AND SHALL MAINTAIN CONNECTIVITY AND FUNCTIONALITY OF SYSTEM COMPONENTS BEYOND SHOWN IMPROVEMENTS PRIOR TO DEMOLITION.EXISTING DRIP IRRIGATION COMPONENTS, EQUIPMENT, PIPING, ETC. MAY REMAIN IN PLACE FOR EXISTING UNDISTURBED PLANTING AREAS.

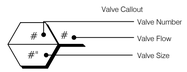
4. CONTRACTOR TO PROVIDE AND INSTALL ALL NEW REMOTE CONTROL VALVES, IRRIGATION PIPE, FITTINGS, AND OTHER APPURTENANCES AS NECESSARY TO COMPLETE THE IRRIGATION SYSTEM.

5. COORDINATE RELOCATION, REROUTE, AND RECONNECTION OF EXISTING EQUIPMENT AS REQUIRED TO RETURN SITE IRRIGATION OPERATION TO 100% WITHIN 48-HOURS FOLLOWING INITIAL DISTURBANCE AND SHUT-OFF OF EXISTING SYSTEM.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird XCZ-100-PRB-COM Drip Control Valve Kit. 1in. Ball Valve with 1in. PESB Valve and 1in. Pressure Regulating 40psi Quick-Check Basket Filter with 200 Mesh Screen.
	Pipe Transition Point above grade Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.
	Area to Receive Drip Emitters GPH Irrigation GPST Threaded pressure compensating drip emitter with 1/2in. FIPT inlet and Diffuser Cap Outlet in Standard Color. Brown = 0.5 GPM; Black = 1.0 GPM; Green = 2.0 GPM; Yellow = 4.0 GPM; Tan = 6.0 GPM; Gray = 8.0 GPM; Orange = 10.0 GPM. Emitter Notes: 1.0 GPH emitters (1 assigned to each 1 gal. plant)

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird 5-LRC 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 1-Piece Body. Or Approved Equal
	Landscape Products Inc. BBV 1/2in., 3/4in., 1in., 1-1/4in., 1-1/2in., 2in., 2-1/2in., 3in. Full Port Brass Ball Valve. Suitable for a full range of liquids and gases in residential and commercial applications.
D	Drain Valve
BF	Zurn 375XL 1" Reduced Pressure Principle Assembly
C	Rain Bird ESP4ME3 4 Station, Hybrid Modular Outdoor Controller. Install in Pedestal Cabinet per Manufacturer's Specifications.
RS	Rain Bird WR2-RFS Wireless Rain/Freeze Sensor.
P	Strong Box SB-16SS Stainless steel pedestal mount controller enclosure with top entry. 16in.W, 38in.H, 15.5in.D.
M	Water Meter 1" New 1" Irrigation Meter Reference Ogden City Detail W-3
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Schedule 40
	Pipe Sleeve: PVC Schedule 40



CRITICAL ANALYSIS

Generated:	2025-02-13 13:02
P.O.C. NUMBER: 01	
Water Source Information:	New 1" Irrigation Meter
Reference Ogden City Detail W-3	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	14.07 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	60 PSI
Elevation Change:	3.00 ft
Service Line Size:	1"
Length of Service Line:	5 ft
Pressure Available:	58 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	10.15 GPM
Flow Available at POC:	14.07 GPM
Residual Flow Available:	3.92 GPM
Critical Station:	1
Design Pressure:	30 PSI
Friction Loss:	0.31 PSI
Fittings Loss:	0.03 PSI
Elevation Loss:	0 PSI
Loss through Valve:	12.3 PSI
Pressure Req. at Critical Station:	42.6 PSI
Loss for Fittings:	0.02 PSI
Loss for Main Line:	0.17 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	14 PSI
Loss for Water Meter:	0.72 PSI
Critical Station Pressure at POC:	57.5 PSI
Pressure Available:	58 PSI
Residual Pressure Available:	0.46 PSI

SCALE

HORIZ 0 20 40

VERT 0 5 10

LP4

SHEET 40

REVISION 0

REV	DATE	DESCRIPTION

STATE OF UTAH
CHRISTOPHER M ROSE
9112943-5501
LICENSED LANDSCAPE ARCHITECT
3/11/25

DESIGNED LTE
DRAWN TSL
CHECKED CMR
DATE

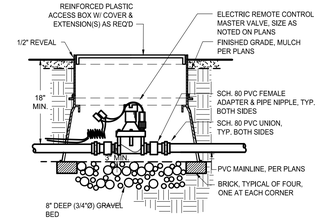
DRAWING SCALE
This bar measures exactly one inch on the original drawing
H: 1" = 20' (22x34) 1" = 40' (11x17)
V: 1" = 10' (22x34) 1" = 20' (11x17)

IRRIGATION PLAN

PLOT DATE: 3/11/2025 11:49 AM

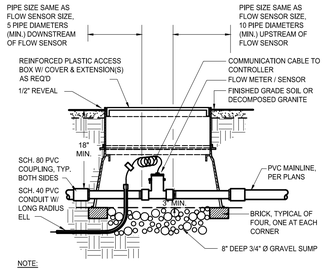
DRAWING NAME: LI.dwg

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176



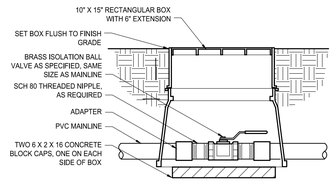
NOTES:
1. ALL WIRES TO BE INSTALLED PER LOCAL CODE. TAPE AND BUNDLE WIRES EVERY 7'. PROVIDE EXPANSION COIL AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 12" Ø PIPE 15 TIMES).
2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL.
3. ALL THREADED PVC JOINTS SHALL BE WRAPPED WITH TEFLON TAPE.

1 MASTER VALVE ASSEMBLY
N.T.S. KHA-GI-02

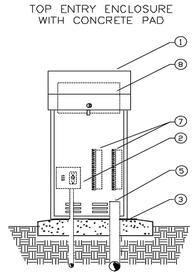


NOTE:
PROVIDE PULSE DECODER, PULSE TRANSMITTER, PULSE TRANSMITTER POWER SUPPLY, AND SURGE PROTECTOR IN ACCORDANCE WITH FLOW SENSOR / CONTROL SYSTEM MANUFACTURER'S RECOMMENDATIONS.

2 FLOW SENSOR ASSEMBLY
N.T.S. KHA-GI-03

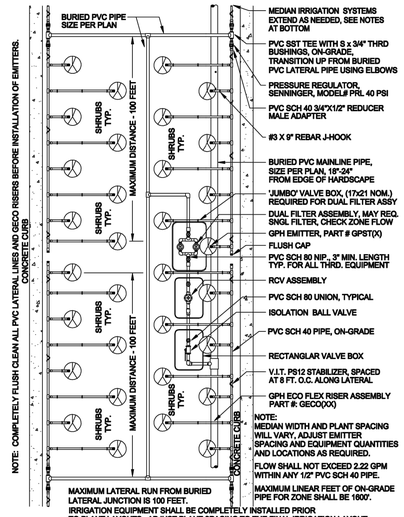


3 BRASS BALL ISOLATION VALVE
N.T.S. KHA-GI-04

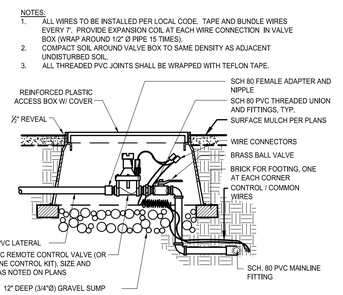


1. Controller enclosure
2. 120 volt service in conduit
3. Poured concrete base—6" min. thickness—extend concrete 4" beyond outside dimensions of enclosure with 1/2"in slope for drainage
5. Direct burial control wires to control valves
6. Finish grade
7. Controller sub-assembly (CSA) includes GFI & terminal strips with placards
8. Automatic controller

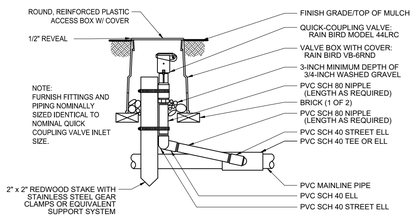
4 IRRIGATION CONTROLLER PEDESTAL
N.T.S. DETAIL-FILE



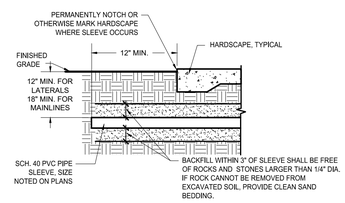
5 MEDIAN ZONE LAYOUT - GPH PRODUCTS
N.T.S.



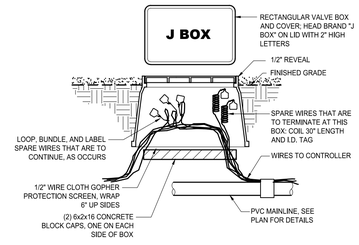
6 ELECTRIC REMOTE CONTROL VALVE
N.T.S. KHA-GI-07



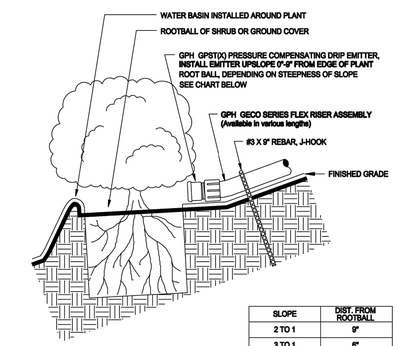
7 QUICK COUPLING VALVE
N.T.S. KHA-GI-08



9 MAINLINE AND LATERAL PIPE SLEEVING
N.T.S. KHA-GI-10



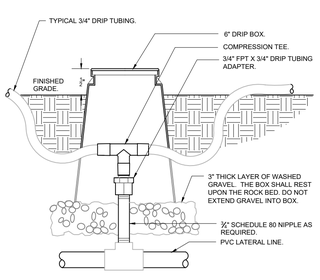
10 IRRIGATION WIRING JUNCTION BOX
N.T.S. KHA-GI-11



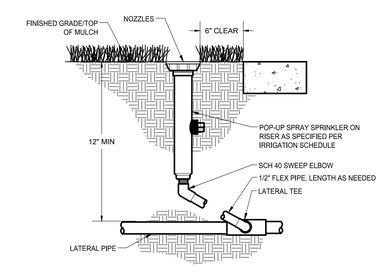
SLOPE	DIST. FROM ROOTBALL
2 TO 1	9"
3 TO 1	6"
4 TO 1	3"
5 TO 1	0"

NOTE:
DRIP EMITTER SHALL BE PLACED DIRECTLY ABOVE PLANT ROOTBALL.
PVC LATERAL LINES SHALL RUN PARALLEL TO SLOPE GRADING.
DRIP EMITTER RISER ASSEMBLIES SHALL RUN PERPENDICULAR TO SLOPE.
ALL IRRIGATION EQUIPMENT SHALL BE COMPLETELY INSTALLED PRIOR TO PLANT LAYOUTS.

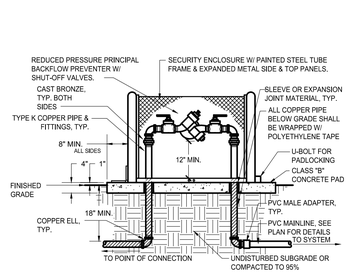
15 SHRUB EMITTER LOCATION - GPH PRODUCTS
N.T.S.



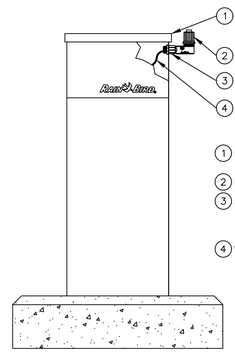
11 PIPE TRANSITION POINT
N.T.S. KHA-GI-19



12 POP-UP SPRAY SPRINKLER
N.T.S. KHA-GI-13

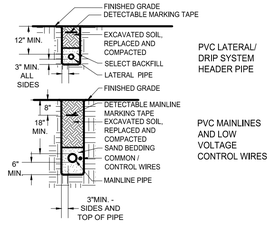


13 BACKFLOW PREVENTER IN SECURITY ENCLOSURE
N.T.S. KHA-GI-01



1. PEDESTAL MOUNTED IRRIGATION CONTROLLER ENCLOSURE
2. RAIN SENSOR: RAIN BIRD RSD-CEx
3. 3/4-INCH SCH 40 RISER EXTENSION (FIPT X MIPT) SECURED TO ENCLOSURE WITH SCH 40 NUT
4. WIRE TO IRRIGATION CONTROLLER

14 RAIN SENSOR - PEDESTAL MOUNT
N.T.S. KHA-GI-21



NOTES:
1. SELECT BACKFILL SHALL BE SAND OR SOIL FREE OF ROCKS AND STONES LARGER THAN 1/4" DIA.
2. BACKFILL MATERIAL SHALL BE WATERED IN AND COMPACTED TO DENSITY OF ADJACENT UNDISTURBED SOIL.

16 PIPE TRENCHING AND BACKFILL - MAINLINE, LATERALS, AND MARKING TAPE
N.T.S. KHA-GI-06

LP5

SHEET 41

0 REVISION

REV | DATE | DESCRIPTION

STATE OF UTAH
CHRISTOPHER M ROSE
9112943-5501
STATE
LICENSED LANDSCAPE ARCHITECT

DESIGNED LTE
DRAWN TSL
CHECKED CMR
DATE

DRAWING SCALE
H: 1" = 20' (22x34) 1" = 40' (11x17)
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GENERAL IRRIGATION SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF IRRIGATION CONTRACTOR

1. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE IRRIGATION CONTRACTING FIRM SPECIALIZING IN IRRIGATION SYSTEMS. SEE THE IRRIGATION PLAN FOR SPECIFIC EQUIPMENT AND SYSTEM LAYOUT.
2. THE IRRIGATION CONTRACTOR MUST HAVE ON ITS STAFF A LICENSED IRRIGATION INSTALLER, AS REGULATED BY THE APPROPRIATE LOCAL JURISDICTION. A LICENSED IRRIGATION INSTALLER SHALL BE PRESENT AT THE PROJECT SITE AT ALL TIMES AS WORK IS IN PROGRESS. THE OWNER MAY DEMAND THAT WORK STOP UNTIL THE CONTRACTOR PROVIDES FOR A LICENSED IRRIGATION INSTALLER TO BE PRESENT AT THE PROJECT SITE AND SUPERVISING ALL IRRIGATION WORK.
3. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.

B. SCOPE OF WORK

1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES, FEES, AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND/OR SHOWN ON THE IRRIGATION PLANS, NOTES, AND DETAILS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. IN CASE OF CONFLICT BETWEEN THESE PLANS AND LOCAL AND/OR STATE CODES, CODES SHALL PREVAIL.
3. THE INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS. THE IRRIGATION PLAN IS GENERALLY DIAGRAMMATIC; COORDINATE IRRIGATION INSTALLATION WITH UTILITY INSTALLATIONS. ACTUAL LOCATION OF CONTROLLER, BACKFLOW DEVICE, PIPING, VALVES, SPRAY HEADS, DRIP IRRIGATION, AND RELATED EQUIPMENT MAY NEED TO BE ADJUSTED BASED ON ACTUAL SITE CONDITIONS.
4. FOR CLARITY PURPOSES, SOME IRRIGATION LINES AND EQUIPMENT ARE SHOWN IN HARDSCAPE AREAS WITHOUT ACCESS SLEEVES; THESE LINES SHALL BE INSTALLED IN A COMMON TRENCH OR AT THE BACK OF CURB IN LANDSCAPE AREAS. MINOR FIELD ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

PRODUCTS

A. ALL MATERIALS SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND. ALL MATERIALS SHALL HAVE A MINIMUM GUARANTEE OF ONE YEAR AGAINST MATERIAL DEFECTS OR DEFECTIVE WORKMANSHIP. ALL MATERIALS SHALL BE OF THE BRANDS AND TYPES NOTED ON THE DRAWINGS OR AS SPECIFIED HEREIN, OR APPROVED EQUAL. THE CONTRACTOR MUST FIRST OBTAIN APPROVAL FROM THE IRRIGATION DESIGNER FOR AN 'APPROVED EQUAL' BEFORE INSTALLING SUCH MATERIALS IN THE FIELD, OR THE CONTRACTOR MAY BE REQUIRED TO REPLACE SUCH MATERIALS AT HIS OWN COST.

B. BACKFLOW PREVENTION DEVICES SHALL BE OF THE SIZE AND TYPE INDICATED ON THE DRAWINGS. INSTALL BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH IRRIGATION CONSTRUCTION DETAILS AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

C. PIPING

1. PRESSURE SUPPLY LINES, DOWNSTREAM OF THE POINT-OF-CONNECTION:
   a. SCHEDULE 40 PVC FOR ALL PIPE 1-1/2" OR LESS
   b. CLASS 315 PVC FOR ALL PIPE 2" TO 2-1/2"
   c. CLASS 200 PVC, GASKETED, FOR ALL PIPE 3" AND LARGER
2. SLEEVING AND NON-PRESSURE LATERAL LINES (DOWNSTREAM FROM VALVES): SCH 40 PVC
3. FITTINGS: SCH. 40 PVC, EXCEPT AS NOTED OTHERWISE.

D. VALVES AND DRIP VALVE ASSEMBLIES: TYPE AND SIZE AS NOTED ON PLANS. EACH VALVE SHALL BEAR A PRE-MANUFACTURED, NUMBERED WATERPROOF TAG BEARING A NUMBER CORRESPONDING TO ITS VALVE SEQUENCE OF OPERATION ON THE CONTROLLER. THE OPERATION SEQUENCE SHALL MATCH THAT AS SHOWN ON THE PLANS.

E. QUICK COUPLERS, BALL VALVES, AND GATE VALVES: TYPE AND SIZE PER PLANS.

F. VALVE BOXES: TYPE AND SIZE AS NOTED ON DETAILS. ALL VALVES BOXES SHALL BE LOCKING BOLT-DOWN TYPE, FURNISHED WITH LIDS AND BOLTS. BOXES SHALL BE OF A SIZE TO CONTAIN THE ENTIRE VALVE AND/OR VALVE ASSEMBLY. THE VALVE BOX LID SHALL HAVE THE VALVE STATION NUMBER HEAT-BRANDED INTO THE LID WITH 2" HIGH LETTERS.

G. FIXED SPRAY HEADS AND ROTORS: PLASTIC BODY POP-UP, WITH A REMOVABLE PLASTIC SPRAY NOZZLE. EXACT TYPE, MODEL, AND NOZZLE SHALL BE AS INDICATED ON PLANS.

H. INTEGRAL EMITTER DRIP TUBING: TUBING MODEL AND FLOW RATE AS NOTED ON PLANS, WITH INTEGRAL EMITTERS WELDED TO THE INSIDE WALL OF THE TUBING AS AN INTEGRAL PART OF THE TUBING ASSEMBLY.

I. AUTOMATIC CONTROLLER: TYPE AND MODEL PER PLANS. PROVIDE VANDAL-PROOF ENCLOSURE FOR ALL EXTERIOR INSTALLATIONS. PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION.

J. WIRING: 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON WIRE.
1. STATION WIRE - ANY COLOR EXCEPT WHITE OR BLUE
2. COMMON WIRE - WHITE
3. EXTRA COMMON WIRES - BLUE

K. WIRE SPLICES: WIRE SPLICES SHALL BE 3M DIRECT BURY SPLICE KIT DBR/Y-G AND INSTALLED PER MANUFACTURES SPECIFICATIONS.

L. RAIN SENSOR: TYPE AND MODEL PER PLANS.

METHODS

A. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE PROPERTY LINES OR LIMITS INDICATED ON PLAN. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQURED TO MOVE SUCH ITEMS AT HIS OWN COST. ENSURE FIELD COORDINATION IS MADE EARLY ON IN THE CONSTRUCTION PHASE SO PLACEMENT LOCATION IS CORRECT.

B. THE IRRIGATION CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK, AND SHALL OBTAIN ALL ENGINEERING, LANDSCAPE, AND OTHER APPLICABLE PLANS & DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE IMMEDIATELY.

C. THE IRRIGATION CONTRACTOR SHALL NOT WILFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADES OR DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND NECESSARY COSTS.

D. SEE UTILITY PLANS FOR IRRIGATION POINTS OF CONNECTION (TAP) AND DOMESTIC WATER SUPPLY.

E. THE IRRIGATION CONTRACTOR SHALL PAY ANY AND ALL FEES AND PERMITS ASSOCIATED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.

F. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK, CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 60 PSI AND LESS THAN 80 PSI. IF STATIC WATER PRESSURE IS OUTSIDE OF THE STATED RANGE, DO NOT PROCEED WITHOUT FIRST NOTIFYING THE IRRIGATION DESIGNER AND OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION WITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.

G. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, STRUCTURES AND UTILITIES.

H. COORDINATE WITH THE OWNER THE PROPOSED LOCATIONS OF THE AUTOMATIC CONTROLLER AND ANY REQUIRED SLEEVES THROUGH THE BUILDING FOR CONTROL WIRES.

I. TRENCHING NEAR EXISTING TREES:

1. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
2. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
3. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
4. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

J. BACKFILL

1. ALL BACKFILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER. BACKFILL MATERIAL SHALL BE FREE FROM RUBBISH, ROCK LARGER THAN 1", LARGE STONES, BRUSH, SOD, FROZEN MATERIAL OR OTHER UNSUITABLE SUBSTANCES THAT MAY DAMAGE PIPE DURING THE BACKFILLING OPERATIONS. SEPARATE OUT ROCKS LARGER THAN 1 INCH IN ANY DIRECTION FROM EXCAVATED MATERIAL, AND REMOVE FROM AREAS TO RECEIVE LANDSCAPING. COVER FOR BOTH TOP AND SIDES OF PIPE SHALL BE A MINIMUM OF 2 INCHES OF ROCK-FREE SOIL, SAND, OR OTHER APPROVED MATERIAL.
2. IN THE EVENT THAT THE MATERIAL FROM THE EXCAVATION OR TRENCHING IS FOUND TO BE UNSUITABLE FOR USE IN BACKFILL, IT SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN PURCHASE AND AND FURNISH SUITABLE BACKFILL MATERIAL CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND OR OTHER APPROVED MATERIALS FREE OF DEBRIS.

K. BACKFLOW PREVENTER INSTALLATION: CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER SOURCES AT LOCATION SHOWN ON PLANS AND AS APPROVED BY THE OWNER, AND SHALL MAKE ANY MINOR CHANGES IN LOCATION AS MAY BE NECESSARY DUE TO ACTUAL SITE CONDITIONS. BACKFLOW PREVENTER HEIGHT SHALL BE AS PER LOCAL CODES AND IRRIGATION DETAILS. INSTALL A BRASS BALL VALVE IMMEDIATELY UPSTREAM OF THE BACKFLOW DEVICE TO SERVE AS AN ISOLATION VALVE. TO EVERY EXTENT POSSIBLE, INSTALL BACKFLOW PREVENTER ION A LOCATION SCREENED FROM PUBLIC VIEW (SUCH AS BEHIND A SHRUB ROW).

L. PIPING:

1. PIPE SIZE SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS FOR LARGER SIZES MAY BE APPROVED.
2. MAINLINE PIPE AND WIRES SHALL BE INSTALLED WITH A MINIMUM COVER OF 24 INCHES. LATERAL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES.
3. ASSEMBLE ALL THREADED FITTINGS WITH TEFLON TAPE, WHICH SHALL BE APPLIED TO MALE THREADS ONLY.
4. ALL SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH APPROVED SOLVENT-WELD PRIMER AND GLUE.
5. PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" HORIZONTAL CLEARANCE FROM ANY OTHER PIPE AND 2" VERTICAL CLEARANCE FROM ANY PIPES THAT CROSS OVER OR UNDER.

M. VALVES:

1. VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS.
2. VALVE BOXES SHALL BE INSTALLED FLUSH WITH THE GRADE, WITH CLEAN PEA GRAVEL LOCATED BELOW THE VALVE AS NOTED ON THE DETAILS. LOCATE BOXES WITHIN 12 TO 24" OF SIDEWALKS OR LANDSCAPE EDGES, WITH TOPS OF BOXES 1" ABOVE FINISH GRADE IN TURF, AND 3" ABOVE FINISH GRADE IN SHRUB AREAS (TO AVOID BEING COVERED BY MULCH).
3. EACH VALVE BOX COVER SHALL BE HEAT-BRANDED WITH THE CONTROLLER STATION NUMBER.
4. DO NOT INSTALL MORE THAN TWO VALVES IN A JUMBO BOX.

N. DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS.

1. SUBSURFACE DRIP LINES SHALL BE BURIED NO MORE THAN 2" BELOW FINISH GRADE.
2. DRIP LINES MOUNTED ON GRADE SHALL BE LOCATED BENEATH LANDSCAPE FABRIC, AND SECURED IN PLACE WITH WIRE STAPLES AT A MAXIMUM OF 48" ON CENTER.

O. SPRAY, ROTOR, AND BUBBLER HEADS:

1. ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
2. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12 INCH MINIMUM LENGTH OF 12 INCH FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER. ALL ROTORS SHALL BE CONNECTED TO LATERAL LINES WITH PRE-MANUFACTURED SWING JOINTS.
3. ALL ROTOR, SPRAY AND BUBBLER HEADS SHALL BE SET PERPENDICULAR AND FLUSH TO FINISH GRADE AND WITH A CLEARANCE OF FOUR INCHES (MINIMUM) FROM THE EDGE OF ANY BUILDINGS, WALLS, BOULDERS, AND HARDSCAPE, UNLESS OTHERWISE SPECIFIED.
4. ALL ROTOR, SPRRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ON WALKS, STREETS, WALLS, ETC.

P. AUTOMATIC CONTROLLER:

1. INSTALL THE CONTROLLER AT THE LOCATION INDICATED BY THE OWNER. INSTALL CONTROLLER WITH A BACKUP BATTERY AS RECOMMENDED BY THE MANUFACTURER.
2. THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLERS AND DEDICATE ONE (1) 20-AMP BREAKER FOR EACH CONTROLLER. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONITRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
3. ALL VALVE CONTROL WIRE SHALL BE AWG 14 TYPE UF, 600 VOLT TEST, DIRECT BURIAL. NO SPLICES SHALL BE ALLOWED EXCEPT AT VALVES AND CONTROLLER. WHERE SPLICES MAY BE NECESSARY DUE TO EXCESSIVELY LONG WIRE RUNS, THE CONTRACTOR SHALL MAKE ALL SPLICES IN 6" ROUND VALVE BOXES WITH 3M'S "DBY-DIRECT BURIAL SPLICE KIT". THE CONTRACTOR SHALL LABEL ALL WIRES WITH WATERPROOF TAGS AND MARKERS AT ALL SPLICES AND VALVE MANIFOLDS, AND SHALL LEAVE A 24" COIL OF EXCESS WIRE AT EACH CONNECTION.
4. PROVIDE #10 COMMON WIRE, DIRECT BURIAL, TO ALL REMOTE CONTROL VALVES.
5. CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3M'S "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS OTHERWISE SPECIFIED).
6. PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS.
7. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING - SEE SLEEVING NOTES.

Q. INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE OWNER. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THE RAIN SENSOR IS PLACED IN A LOCATION WHERE IT CAN RECEIVE ADEQUATE RAINFALL WITHOUT OBSTRUCTIONS. IF IT IS PLACED IN AN INADEQUATE LOCATION, THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO RELOCATE IT AT NO ADDITIONAL COST TO THE OWNER.

R. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

S. QUALITY CONTROL

1. PERFORM COVERAGE TESTS AFTER IRRIGATION SYSTEM IS COMPLETED, BUT PRIOR TO ANY PLANTING AND PERFORM TESTING IN THE PRESENCE OF THE IRRIGATION DESIGNER AND THE CONSTRUCTION MANAGER.
2. TEST SYSTEM TO ASSURE THAT ALL LAWN AND PLANTING AREAS ARE WATERED COMPLETELY AND UNIFORMLY.
3. MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.

T. CLEAN UP

1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
2. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.

U. INSPECTION AND ACCEPTANCE

1. UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
2. WHEN THE INSPECTED WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
3. THE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
4. CONTROLLER CHART: THE IRRIGATION CONTRACTOR SHALL PROVIDE A 11" X 17" COLOR-CODED, LAMINATED COPY OF THE IRRIGATION LAYOUT AND PLACE IT IN THE CONTROLLER'S COVER. THE CONTROLLER CHART SHALL CLEARLY DELINEATE THE AREAS COVERED BY EACH VALVE, USING A SEPARATE COLOR FOR EACH ZONE.
5. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION (IF APPLICABLE):
   a. QUICK COUPLER KEYS (2)
   b. CONTROLLER MANUAL (1)
   c. CONTROLLER KEYS (2)
   d. A MINIMUM OF (2) COPIES OF RECORD DRAWINGS. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.

V. REFER TO THE PLANTING SPECIFICATIONS FOR ADDITIONAL CONDITIONS OF FINAL ACCEPTANCE AND START OF THE MAINTENANCE PERIOD.

W. WARRANTY

1. THE IRRIGATION SYSTEM SUPPLIED AND INSTALLED SHALL BE WARRANTED (LABOR AND MATERIALS) TO REMAIN OPERATIONAL FOR A PERIOD OF 12 MONTHS AFTER THE DATE OF FINAL ACCEPTANCE. DURING THIS PERIOD, THE CONTRACTOR SHALL ALSO REPAIR ANY SETTLEMENT OF THE IRRIGATION TRENCHES.
2. BY THE END OF THE WARRANTY PERIOD, ANY IRRIGATION PART THAT IS EITHER NON-OPERATIONAL OR THAT IS OPERATING BELOW STANDARDS AS DETERMINED BY THE OWNER, SHALL BE REMOVED FROM THE SITE AND SHALL BE REPLACED. REPLACEMENTS SHALL BE OF THE SAME KIND AS SPECIFIED IN THE IRRIGATION LEGEND AND SHALL BE INSTALLED AS ORIGINALLY SPECIFIED.
3. IRRIGATION PARTS DAMAGED OR IMPAIRED DUE TO ACTS OF GOD, VANDALISM, AND/OR THE OWNER'S IMPROPER MAINTENANCE SHALL NOT BE COVERED BY THIS WARRANTY.

Y. SHOULD THE PERMITTING JURISDICTION REQUIRE AN IRRIGATION AUDIT, THE IRRIGATION CONTRACTOR SHALL RETAIN THE SERVICES OF A THIRD-PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR, AT NO ADDITIONAL COST TO THE OWNER.

LP6

SHEET 42

0 REVISION

REV	DATE	DESCRIPTION

STATE OF UTAH — CHRISTOPHER M ROSE — 9112943-5501 — 3/14/25 — LICENSED LANDSCAPE ARCHITECT

DESIGNED LTE | DRAWN TSL | CHECKED CMR | DATE

DRAWING SCALE — This bar measures exactly one inch on the original drawing

H: 1" = 20' (22x34) 1" = 40' (11x17)

V: 1" = 10' (22x34) 1" = 20' (11x17)

IRRIGATION SPECIFICATIONS

PLOT DATE: 3/11/2025 11:49 AM

DRAWING NAME: LI.dwg

Kimley»Horn

111 EAST BROADWAY, SUITE 600
SALT LAKE CITY, UT 84111
WWW.KIMLEY-HORN.COM
PHONE: 385-212-3176