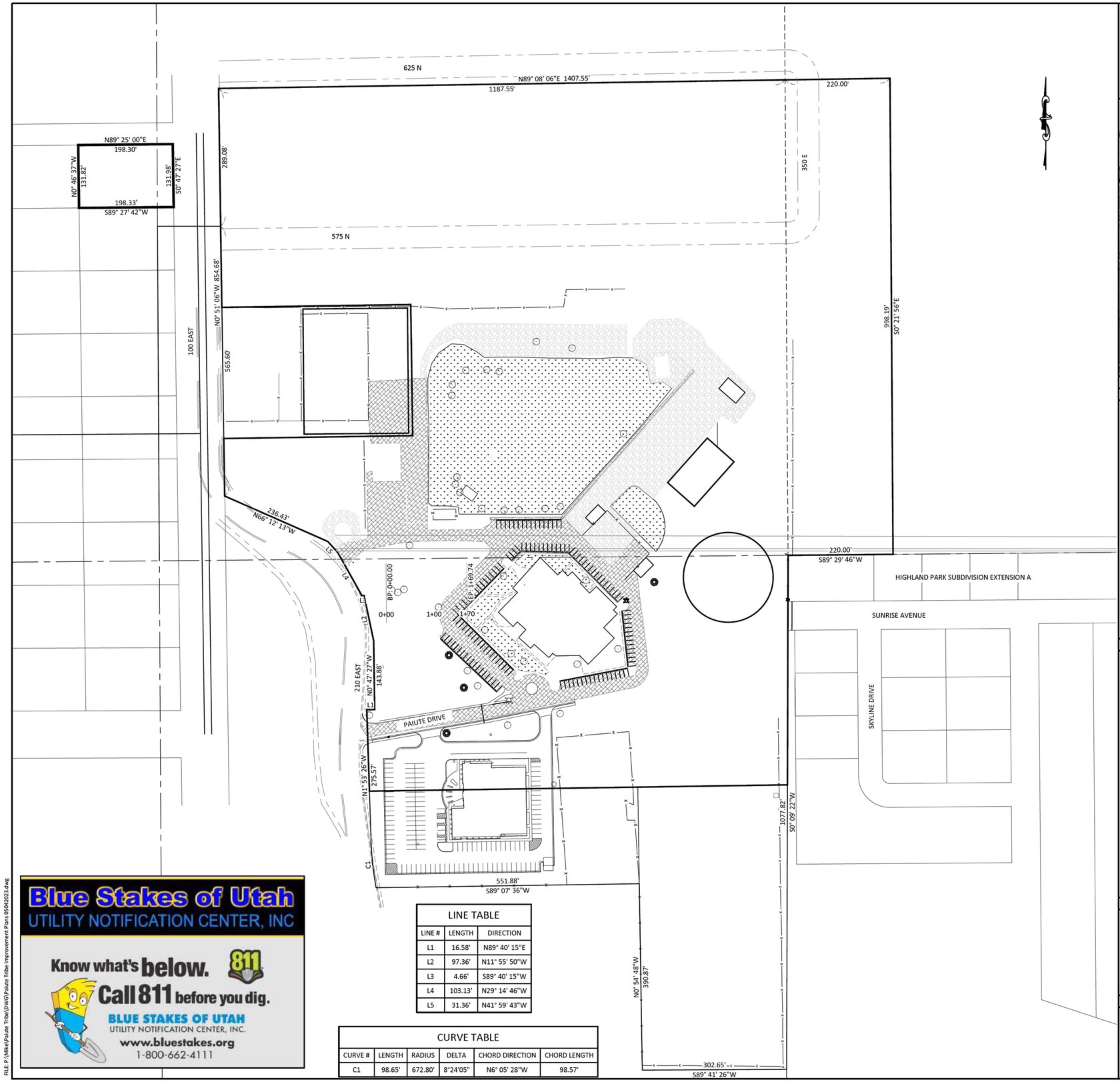

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	16.58'	N89° 40' 15"E
L2	97.36'	N11° 55' 50"W
L3	4.66'	S89° 40' 15"W
L4	103.13'	N29° 14' 46"W
L5	31.36'	N41° 59' 43"W

CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	98.65'	672.80'	8°24'05"	N6° 05' 28"W	98.57'

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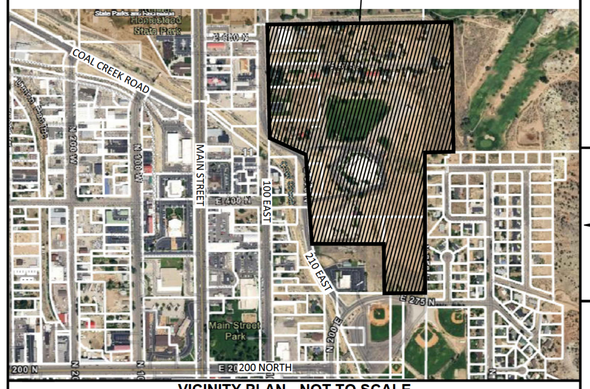
IMPROVEMENT PLANS FOR

THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH



VICINITY PLAN - NOT TO SCALE

NOTES

CONSTRUCTION NOTES:

1. ELEVATIONS, BASIS OF BEARINGS, AND BASIS OF COORDINATES FOR THESE PLANS ARE PER THE CEDAR CITY ENGINEER'S GPS BASE AND CALIBRATION AND THE NAVD 29 DATUM.
2. THE BASIS OF BEARINGS IS N0°19'14"W. ALONG THE 1/4 SECTION LINE 2660.51 FEET BETWEEN THE CENTER 1/4 CORNER TO THE NORTH 1/4 CORNER OF SECTION 11, TOWNSHIP 36 SOUTH, RANGE 11 WEST, SLB&M.
3. THE PAVEMENT SECTION SHALL CONSIST 3 INCHES OF ASPHALT OVER 6 INCHES OF AGGREGATE BASE OVER 18 INCHES OF TYPE 1 GRAVEL PER THE PARKING LOT REDESIGN FOR THE PAIUTE INDIAN TRIBE OF UTAH PROJECT GEOTECHNICAL REPORT PERFORMED BY GEM ENGINEERING, PROJECT NUMBER RG-2773, DATED OCTOBER 27, 2021.
4. OVER EXCAVATION REQUIREMENTS FOR ANY MATERIAL SUPPORTING BUILDINGS SHALL FOLLOW THE REQUIREMENTS OUTLINED IN THE NEW CEDAR CITY BUILDING DESIGN FOR THE PAIUTE TRIBE OF UTAH GEOTECHNICAL REPORT PERFORMED BY GEM ENGINEERING, PROJECT NUMBER RG-2213, DATED OCTOBER 10, 2019.

SEWER AND WATER NOTES:

1. SEE DETAIL S1 FOR SEWER LATERAL DETAILS.
2. SEWER LATERAL SHALL BE 6" DIAMETER AND SHALL CONFORM TO ASTM D-3034, SDR 35, AND SHALL CONNECT THE PROPOSED STRUCTURE TO THE EXISTING SEWER MAIN ON SITE.
3. MINIMUM DEPTH OF COVER TO TOP OF WATER LINE IS 36 INCHES.
4. COORDINATE ALL WATER INSTALLATION WITH THE PUBLIC WORKS DIRECTOR, RYAN MARSHALL.
5. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER MAINS AND SEWER MAINS. A MINIMUM OF 18 INCHES VERTICAL SEPARATION IS REQUIRED BETWEEN WATER AND SEWER LINES AT ALL CROSSINGS WITH THE WATER LINE BEING ABOVE THE SEWER LINE. ANY DEVIATION FROM THIS WILL REQUIRE AN EXCEPTION.
6. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER METERS AND SEWER LATERALS.

LEGAL DESCRIPTION:

BEGINNING AT A POINT N0°19'14"W ALONG THE 1/4 SECTION LINE 701.41 FEET AND N90°00'00"E 132.40 FEET FROM THE CENTER 1/4 CORNER OF SECTION 11, T36S, R11W, SLB&M (SAID POINT BEING ON THE EAST R.O.W LINE OF 100 EAST STREET), AND RUNNING THENCE N0°51'06"W ALONG SAID R.O.W. LINE 289.08 FEET, THENCE N89°08'06"E 1407.55 FEET, THENCE S0°21'56"E 998.19 FEET TO THE 1/4 SECTION LINE, THENCE S89°29'46"W 220.00 FEET TO THE CENTER EAST 1/16 CORNER, THENCE S0°09'22"W ALONG THE 1/16 SECTION LINE 1077.82 FEET, THENCE S89°41'26"W 302.56 FEET, THENCE N0°54'48"W 390.87 FEET, THENCE S89°07'36"W 551.88 FEET TO A POINT OF CURVE, THENCE ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 672.80 FEET A DISTANCE OF 98.65 FEET (THE CHORD OF SAID CURVE BEARS N06°05'28"W 98.57 FEET, THENCE N01°53'26"W 275.57 FEET, THENCE N89°40'15"E 16.58 FEET, THENCE N0°47'27"W 143.88 FEET, THENCE N11°55'50"W 97.36 FEET, THENCE S89°40'15"W 4.66 FEET, THENCE N29°14'46"W 103.13 FEET, THENCE N41°59'43"W 31.36 FEET, THENCE N66°12'13"W 236.43 FEET TO THE EAST R.O.W. LINE OF 100 EAST STREET, THENCE N0°51'06"W ALONG SAID R.O.W. LINE 565.60 FEET.

CONTAINS 48.18 ACRES OF LAND.

UTILITY CONTACT INFORMATION:

ROCKY MOUNTAIN POWER, CAROLYN DELEEUW	435-865-3310
DOMINION ENERGY, KEILY HIATT	435-865-6234
CENTURY LINK, BRAXTON PETERSON	435-884-7920
TDS, NATHAN JOHNSON	435-233-7461
CITY WATER, ROB MITCHELL	435-865-4507
CITY SEWER, ERIC BONZO	435-865-9901
CITY STREETS, JEFF HUNTER	435-586-2912
CITY STORM DRAIN, JEFF HUNTER	435-586-2912
CITY ENGINEERING, JONATHAN STATHIS	435-865-5119
BLUE STAKES	811

SHEET INDEX:

COVER SHEET..... X
DEMOLITION PLAN..... 1
SITE PLAN..... 2
GRADING PLAN..... 3
UTILITY PLAN..... 4
PLAN AND PROFILE CITY STORM DRAIN 5-6
PLAN AND PROFILE FOUR POINTS MEDICAL..... 7
PLAN AND PROFILE MAIN BUILDING DOWN SPOUTS - INLET..... 7
DETAIL SHEET..... 8-9

PLATT & PLATT, INC
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195 N. 100 E.
CEDAR CITY, UT 84720
TEL: (435) 586-6151
FAX: (435) 586-8567
EMAIL: PLATT@INFOWEST.COM

REVISION:	DESCRIPTION
DATE: JUNE 2, 2023	FIRST SUBMITTAL
DATE:	
DATE:	
DATE:	

COVER SHEET
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER

CHECKED BY: M.R. PLATT

DATE: Jun 09, 2023

SCALE: 1" = 100'

DEMOLITION PLAN FOR

THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

PAIUTE INDIAN TRIBE OF UTAH ~B-0072-0002-0000~

UNITED STATES GOVERNMENT TRUST ~B-0072-0002-0000~

236.43' N66° 12' 13"W

L4

L3

L2

210 EAST

N0° 47' 27"W 143.88'

L1

PAIUTE DRIVE

N1° 53' 26"W 275.57'

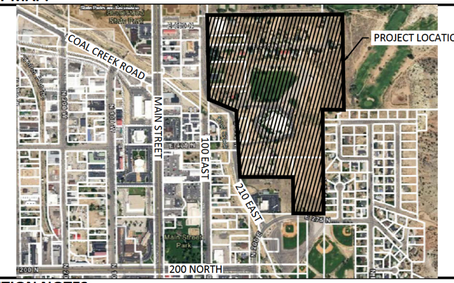
20.00' WIDE OVERHEAD POWER EASEMENT

20.00' WIDE UTILITY & DRAIN EASEMENT

1077.82' S0° 09' 22"W

0 50 100 Feet

VICINITY MAP:



DEMOLITION NOTES:

[redacted]

2. THERE IS AN EXISTING LANDSCAPED ISLAND AS SHOWN THAT WILL NEED TO BE REMOVED.

[redacted]

4. ALL PARKING STALLS ARE MEANT TO REMAIN.
5. PORTIONS OF THE EXISTING PAVEMENT THAT ADJOIN ANY PROPOSED PAVEMENT WILL NEED TO BE SAWCUT AND REMOVED.

KEYNOTES:

1. CONSTRUCTION LIMITS - AREA SHOWN
2. YOUTH AND SENIOR CENTER
3. PLAY PARK
4. EXISTING MAINTENANCE BUILDING
5. HANDGAME AREA
6. RESTROOMS
7. EDGE OF EXISTING GRAVEL
8. EDGE OF EXISTING PAVEMENT

[redacted]

11. EXISTING PARKING STALLS
12. EXISTING PAIUTE INDIAN TRIBE OF UTAH MAIN BUILDING
13. EXISTING FOUR POINTS MEDICAL BUILDING

[redacted]

15. EXISTING RETENTION POND

[redacted]

17. FIELD VERIFY EXISTING 8-INCH WATER LINE
18. EXISTING BULBED CURB TO BE REMOVED. EXISTING UTILITIES TO BE RELOCATED IN LANDSCAPE
19. EXISTING BULBED CURB MUST BE PARTIALLY REMOVED TO CREATE ISLAND AROUND FIRE HYDRANT. THE ISLAND IS NECESSARY SO THAT STORM WATER IS NOT DAMMED BY THE BULB.
20. EXISTING ARBOR
21. EXISTING PAVEMENT TO BE REMOVED IN PREPARATION FOR RE-GRADING.
22. VARIOUS EXISTING UTILITIES IN THIS AREA TO BE REMOVED OR RELOCATED AT THE PLEASURE OF THE TRIBAL REPRESENTATIVES.

LEGEND:

- PROJECT BOUNDARY
- EXISTING SEWER MANHOLE
- 8 SS — EXISTING 8-INCH SEWER MAIN
- SL — PROPOSED SEWER LATERAL
- 8 W — EXISTING 8-INCH WATER MAIN
- W — PROPOSED WATER LATERAL
- EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- OHP — EXISTING OVERHEAD POWER LINE
- UGP — EXISTING UNDERGROUND POWER LINE
- EASEMENT
- SD-18 — EXISTING 18-INCH STORM DRAIN
- SD-8 — PROPOSED 8-INCH STORM DRAIN
- SD-18 — PROPOSED 18-INCH STORM DRAIN
- SD-36 — PROPOSED 36-INCH STORM DRAIN
- SD-42 — PROPOSED 42-INCH STORM DRAIN
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED GRATED JUNCTION BOX
- EXISTING TREES
- LANDSCAPED AREA
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED CURB, GUTTER, & SIDEWALK
- 5555 — EXISTING CONTOUR (2-FT INTERVAL)
- 5555 — FINISHED CONTOUR (2-FT INTERVAL)

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DEMOLITION PLAN FOR
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

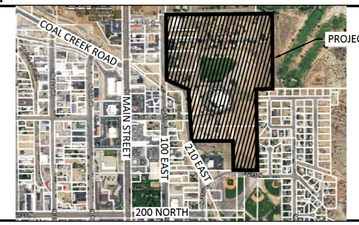
LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER
CHECKED BY: M.R. PLATT
DATE: Jun 09, 2023
SCALE: 1" = 50'

SITE PLAN FOR

THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

VICINITY MAP:



NOTES:

1. OWNERS INFORMATION:
   OWNER: UNITED STATES GOVERNMENT TRUST
   CONTACT: KIM LLOYD
   ADDRESS: 440 PAIUTE DRIVE
   CEDAR CITY, UT 84721
2. PARCEL INFORMATION:
   ~B-0072-0000-0000~ ~B-0072-0002-0000~ ~B-0072-0003-0000~ ~B-0072-0004-0000~
   ~B-0996-0000-0000~ ~B-0999-0000-0000~
3. THE PROPERTY IS ZONED: R-2-2
   3.1. SETBACKS:
   3.1.1. FRONT: 25'
   3.1.2. SIDE: 8'
   3.1.3. REAR: 20'
4. CONTAINS 48.18 ACRES
5. THE BASIS OF BEARINGS, COORDINATES, AND ELEVATIONS FOR THIS PROJECT ARE PER THE CEDAR CITY ENGINEER'S GPS BASE STATION AND CALIBRATIONS. BASIS OF BEARINGS IS N0°19'14"W. ALONG THE 1/4 SECTION LINE 2660.51 FEET FROM THE CENTER 1/4 CORNER TO THE NORTH QUARTER CORNER OF SECTION 11, TOWNSHIP 36 SOUTH, RANGE 11 WEST, SLB&M
6. THE MAJORITY OF THE PROPERTY IS LOCATED IN FLOOD ZONE C, AN AREA OF MINIMAL FLOODING. A PORTION ON THE WEST BOUNDARY IS LOCATED IN FLOOD ZONE X, AN AREA WITH 0.2% ANNUAL CHANCE OF FLOODING. DETERMINATION OF THESE AREAS IS BASED ON THE FEMA FLOOD INSURANCE RATE MAP, IRON COUNTY, UTAH (UNINCORPORATED AREAS) COMMUNITY PANEL NUMBER 4900730750B, EFFECTIVE DATE: JULY 17, 1986.
7. THIS PROJECT DOES NOT REQUIRED CONNECTION TO ANY EXISTING SEWER AND WATER MAINS. THESE HAVE BEEN SHOWN TO ENSURE ANY CONFLICT BETWEEN THE PROPOSED STORM DRAIN LINE AND THESE UTILITIES CAN BE FOR-SEEN AND RESOLVED.
8. THIS PROPERTY IS LOCATED WITHIN THE AIRPORT INFLUENCE ZONE.

KEYNOTES:

1	CONSTRUCTION LIMITS
2	YOUTH AND SENIOR CENTER
3	PLAY PARK
4	EXISTING MAINTENANCE BUILDING
5	HANDGAME AREA
6	RESTROOMS
7	EDGE OF EXISTING GRAVEL
8	EDGE OF EXISTING PAVEMENT
[redacted]	
10A	15 EXISTING PARKING STALLS
10B	110 EXISTING PARKING STALLS AROUND MAIN BUILDING
11A	204 PROPOSED PARKING STALLS - SEE PARKING STALL DETAIL ON SHEET 9
11B	113 PROPOSED PARKING STALLS - SEE PARKING STALL DETAIL ON SHEET 9
12	EXISTING MAIN BUILDING
13	EXISTING FOUR POINTS MEDICAL BUILDING
14	EXISTING OVERFLOW RETENTION POND
15	EXISTING 4 POINTS MEDICAL STORM DRAIN LINE
16	[redacted] 4 POINTS MEDICAL STORM DRAIN LINE
17	[redacted] CITY STORM DRAIN LINE
18	PROPOSED CRYHOUSE
19A	PROPOSED 6' WIDE CROSS GUTTER
19B	PROPOSED 6' WIDE CROSS GUTTER - TO CAPTURE STORM WATER FROM CATCH GUTTERS AS SHOWN
20	NEW CURB AND GUTTER TO REPLACE REMOVED BULBS.

LEGEND:

	PROJECT BOUNDARY
S	EXISTING SEWER MANHOLE
8 SS	EXISTING 8-INCH SEWER MAIN
SL	PROPOSED SEWER LATERAL
8 W	EXISTING 8-INCH WATER MAIN
W	PROPOSED WATER LATERAL
	EXISTING FIRE HYDRANT
	WATER VALVE
	WATER METER
OHP	EXISTING OVERHEAD POWER LINE
UGP	EXISTING UNDERGROUND POWER LINE
	EASEMENT
SD-18	EXISTING 18-INCH STORM DRAIN
SD-8	PROPOSED 8-INCH STORM DRAIN
SD-18	PROPOSED 18-INCH STORM DRAIN
SD-36	PROPOSED 36-INCH STORM DRAIN
SD-42	PROPOSED 42-INCH STORM DRAIN
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED GRATED JUNCTION BOX
	EXISTING TREES
	LANDSCAPED AREA
	EXISTING PAVEMENT
	PROPOSED PAVEMENT
	PROPOSED CURB, GUTTER, & SIDEWALK
5555	EXISTING CONTOUR (2-FT INTERVAL)
5555	FINISHED CONTOUR (2-FT INTERVAL)

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SITE PLAN FOR
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

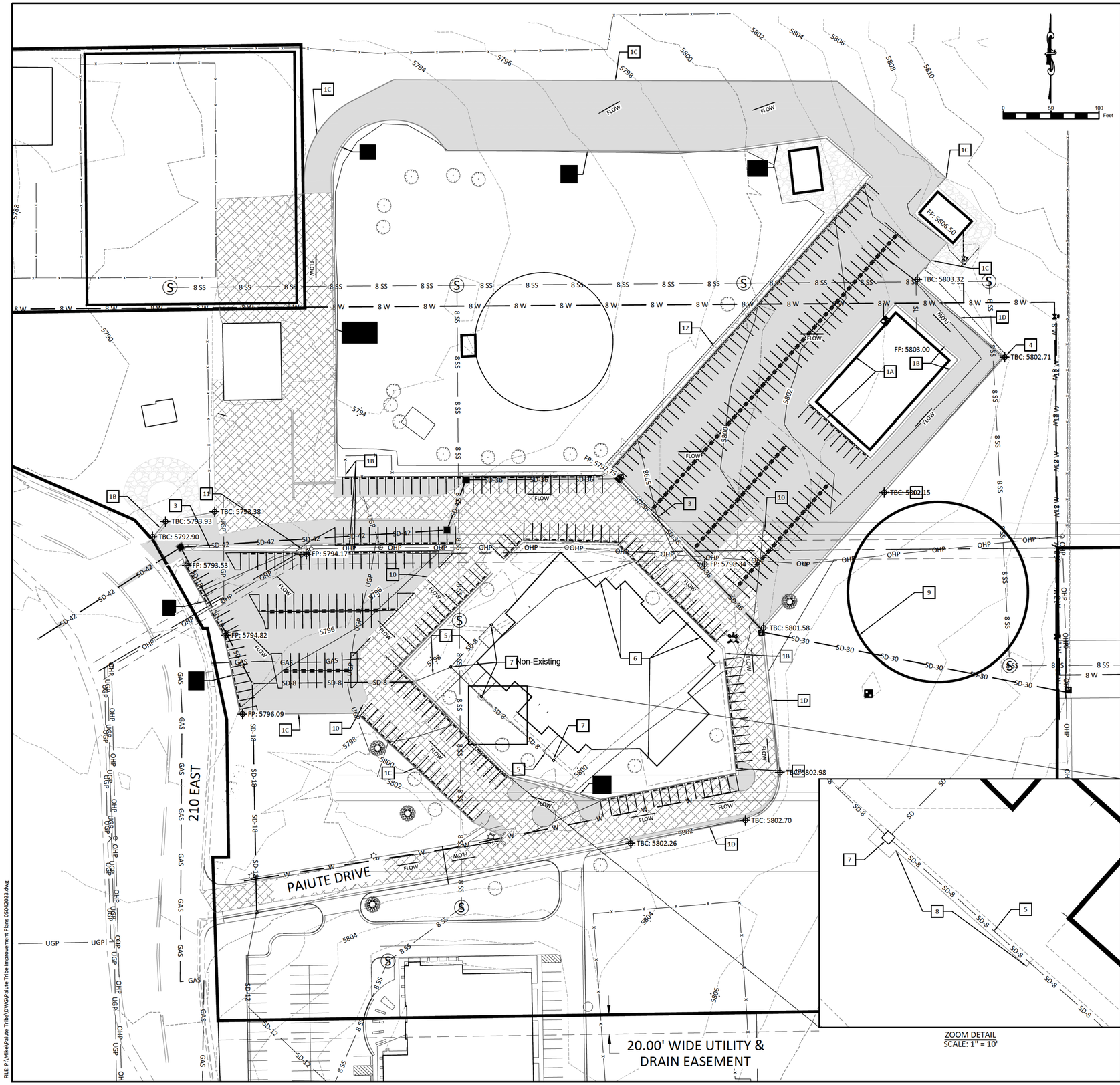
LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER
CHECKED BY: M.R. PLATT
DATE: Jun 09, 2023
SCALE: 1" = 50'

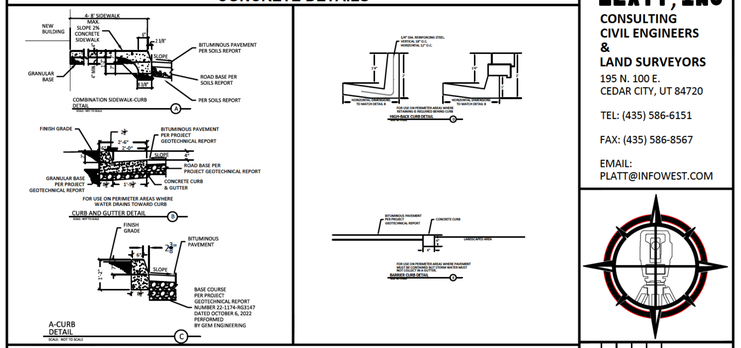
FILE P:\Mike\Paiute Tribe\DWG\Paiute Tribe Improvement Plans 05042023.dwg

GRADING PLAN FOR

THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH



CONCRETE DETAILS



CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO CEDAR CITY ENGINEERING STANDARDS AND ENGINEERING STANDARD DRAWINGS, INCLUDING LATEST REVISIONS.
2. THE PAVEMENT STRUCTURE SHALL CONSIST OF 3 INCHES OF BITUMINOUS ASPHALT OVER 6 INCHES OF AGGREGATE BASE, OVER 18 INCHES OF TYPE 1 GRAVEL PER THE PROJECT GEOTECHNICAL REPORT PERFORMED BY GEM ENGINEERING, PROJECT NUMBER RG-2773 DATED OCTOBER 27, 2021.Addition report 24-2075-RG3603
3. OVER EXCAVATION REQUIREMENTS FOR ANY MATERIAL SUPPORTING BUILDINGS SHALL FOLLOW THE REQUIREMENTS OUTLINED IN THE NEW CEDAR CITY BUILDING DESIGN FOR THE PAIUTE TRIBE OF UTAH GEOTECHNICAL REPORT PERFORMED BY GEM ENGINEERING, PROJECT NUMBER RG-2213, DATED OCTOBER 10, 2019.REPORT 24-2075-RG3603

GRADING NOTES:

1. ALL EXCAVATIONS AND GRADING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CEDAR CITY.
2. THE CONTRACTOR SHALL PROVIDE SUITABLE EQUIPMENT TO CONTROL DUST AND AIR POLLUTION CAUSED BY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL ALSO PROVIDE SUITABLE MUD AND DIRT CONTAINMENT TO MAINTAIN THE WORK SITE, ACCESS ROADWAYS AND ADJACENT PROPERTIES IN A CLEAN CONDITION.
3. STORM WATER PRODUCED ON SITE WILL BE DIRECTED TO THE MASTER PLANNED STORM DRAIN LINE WHICH IS PARTIALLY DESIGNED IN THIS SET OF PLANS. SAID STORM WATER WILL BE REMOVED FROM THE SITE VIA THIS STORM DRAIN LINE.
4. ALL STORM WATER CALCULATIONS, TO INCLUDE PIPE SIZING AND PIPE SLOPES, ARE PROVIDED ON SHEET 9.

EARTHWORK NOTES:

1. FINISHED CONTOURS ARE GENERATED TO THE FINISHED GRADE OF THE SITE AND ARE PROVIDED AT 2' INTERVALS.
2. THE OWNER, OWNER'S REPRESENTATIVE, OR CONTRACTOR SHALL BE RESPONSIBLE TO EVALUATE THE ONSITE SOILS, REVIEW THE GEOTECHNICAL REPORT, AND SHALL BE ABLE TO ANTICIPATE THE EARTHWORK FOR THIS PROJECT.
3. CUT AND FILL VOLUMES ARE BASED ON 3D MODELING COMPUTATIONS, AND ARE COMPACTED INPLACE VOLUMES. EXPANSION AND SHRINKAGE CONDITIONS OFTEN ASSOCIATED WITH SOILS DURING CONSTRUCTION ARE NOTE REFLECTED.
   - 3.1. CUT & FILL
     - 3.1.1. CUT: 529 CYDs
     - 3.1.2. FILL: 899 CYDs
     - 3.1.3. NET FILL: 370 CYDs

GRADING KEYNOTES:

1A	COMBINATION 6' WIDE SIDEWALK-CURB PER CONCRETE DETAIL A PROVIDED ABOVE.
1B	A-CURB WITH 6' WIDE SIDEWALK PER CONCRETE DETAIL B PROVIDED ABOVE.
1C	A-CURB PER CONCRETE DETAIL C PROVIDED ABOVE.
1D	HIGH-BACK CURB PER CONCRETE DETAIL D PROVIDED ABOVE.
1E	BARRIER CURB PER CONCRETE DETAIL E PROVIDED ABOVE.
3	6' WIDE CROSS GUTTER (C2)
4	CUT EXISTING GRADE TO MEET SLOPE REQUIREMENTS AROUND PROPOSED STRUCTURE.
5	8" DIA. STORM DRAIN PIPE TO CONVEY STORM WATER FROM DOWNSPOUTS TO MAJOR SD LINE AS SHOWN. MUST MAINTAIN A MINIMUM SLOPE OF 0.65%.
6	DOWNSPOUTS NOT CONNECTED TO STORM DRAIN LINE TO SURFACE FLOW TO INLETS.
7	STORM DRAIN JUNCTION BOX (24" SQ. INNER DIM.) Non-Existing, roof drains connected to gutters
8	2' WIDE CROSS GUTTER
9	BOUNDARY OF OVERFLOW RETENTION POND.
10	MATCH EXISTING PAVEMENT ELEVATION
11	SEE WALKWAY DETAIL PROVIDED ON SHEET 9
12	EXISTING CURB AND GUTTER WITH 4' WIDE SIDEWALK

LEGEND:

- PROJECT BOUNDARY
- EXISTING SEWER MANHOLE
- 8 SS — EXISTING 8-INCH SEWER MAIN
- SL — PROPOSED SEWER LATERAL
- 8 W — EXISTING 8-INCH WATER MAIN
- W — PROPOSED WATER LATERAL
- EXISTING FIRE HYDRANT
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- PROPOSED GRATED JUNCTION BOX
- EXISTING TREES
- LANDSCAPED AREA
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- 5555 — EXISTING CONTOUR (2-FT INTERVAL)
- 5555 — FINISHED CONTOUR (2-FT INTERVAL)

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GRADING PLAN FOR
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CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY:
CJ WEAVER

CHECKED BY:
M.R. PLATT

DATE:Jun 09, 2023

SCALE: 1" = 50'

FILE: P:\Mike\Paiute Tribe\DWG\Paiute Tribe Improvement Plans 05042023.dwg

UTILITY PLAN FOR
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

PAIUTE INDIAN TRIBE OF UTAH ~B-0072-0002-0000~

UNITED STATES GOVERNMENT TRUST ~B-0072-0002-0000~

20.00' WIDE OVERHEAD POWER EASEMENT

20.00' WIDE UTILITY & DRAIN EASEMENT

210 EAST

PAIUTE DRIVE

0 50 100 Feet

UTILITY NOTES:

1. CONTRACTOR, OWNER, OR OWNER'S REPRESENTATIVE TO COORDINATE WITH BLUE STAKES BY CALLING 811 BEFORE ANY EXCAVATION OR TRENCHING IS TO OCCUR FOR UTILITY INSTALLATION.
2. ALL WATER FACILITIES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS DEPARTMENT OF CEDAR CITY.
3. 10 FEET OF HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN WATERLINES AND ALL OTHER UTILITIES FROM THE EDGE OF PIPE. IF THIS IS NOT POSSIBLE, 18 INCHES OF VERTICAL SEPARATION IS REQUIRED AT ALL UTILITY INTERSECTIONS.
4. THIS UTILITY PLAN DISPLAYS ALL UTILITIES PROVIDED IN THE CITY'S AS-BUILT FILES, HOWEVER, IT IS UNDERSTOOD THAT SMALLER UTILITY LINES EXIST BUT ARE NOT SHOWN. CONTRACTORS ARE TO CONTACT BLUE STAKES AS ADVISED ABOVE AND PROCEED WITH CAUTION.
5. THIS ONLY NEW UTILITIES PROPOSED IN THIS PROJECT ARE SEWER AND WATER LATERALS FOR THE PROPOSED CRYHOUSE SHOWN IN THE NORTHEAST PORTION OF THE PROJECT. ALL OTHER UTILITIES ARE SHOWN TO PROVIDED COORDINATION WITH THE PROPOSED STORM DRAIN LINE.

UTILITY KEYNOTES:

1. [redacted] 6" SEWER LATERAL
2. NEW WATER LATERAL AND METER
   N: 110301.91
   E: 116687.62
3. EXISTING 8-INCH SEWER MAIN
4. EXISTING SEWER MANHOLE - SEE TABLE PROVIDED BELOW
5. EXISTING 8-INCH WATER MAIN - FIELD VERIFICATION NECESSARY
6. EXISTING OVERHEAD POWER LINE
7. EXISTING UNDERGROUND POWER LINE
8. EXISTING GAS LINE
9. FIELD VERIFY DEPTH OF UTILITY LINE PRIOR TO INSTALLATION OF STORM DRAIN LINE.
10A. EXISTING FIRE HYDRANT
   N: 109966.72
   E: 116530.66
10B. EXISTING FIRE HYDRANT
   N: 109759.88
   E: 116284.29
11. EXISTING WATER METER
   N: 109910.48
   E: 116672.07
12A. EXISTING WATER VALVE
   N: 110304.77
   E: 116866.60
12B. EXISTING WATER VALVE
   N: 110364.87
   E: 116771.18
13. BOUNDARY OF OVERFLOW RETENTION POND

SEWER MANHOLE TABLE		
DESCRIPTION	NORTHING	EASTING
SSMH 4A	110334.88	115942.14
SSMH 4B	110337.11	116241.89
SSMH 4C	110339.34	116541.64
SSMH 4D	110341.40	116797.73
SSMH 4E	109939.50	116819.76
SSMH 4F	109986.92	116244.45
[redacted]4G	109686.71	116246.80
SSMH 4H	109630.85	116170.02

LEGEND:

- PROJECT BOUNDARY
- EXISTING SEWER MANHOLE
- 8 SS — EXISTING 8-INCH SEWER MAIN
- SL — PROPOSED SEWER LATERAL
- 8 W — EXISTING 8-INCH WATER MAIN
- W — PROPOSED WATER LATERAL
- EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- OHP — EXISTING OVERHEAD POWER LINE
- UGP — EXISTING UNDERGROUND POWER LINE
- EASEMENT
- SD-18 — EXISTING 18-INCH STORM DRAIN
- SD-8 — PROPOSED 8-INCH STORM DRAIN
- SD-18 — PROPOSED 18-INCH STORM DRAIN
- SD-36 — PROPOSED 36-INCH STORM DRAIN
- SD-42 — PROPOSED 42-INCH STORM DRAIN
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED GRATED JUNCTION BOX
- EXISTING TREES
- LANDSCAPED AREA
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED CURB, GUTTER, & SIDEWALK
- 5555 — EXISTING CONTOUR (2-FT INTERVAL)
- 5555 — FINISHED CONTOUR (2-FT INTERVAL)

PLATT & PLATT, INC
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
195 N. 100 E.
CEDAR CITY, UT 84720
TEL: (435) 586-6151
FAX: (435) 586-8567
EMAIL: PLATT@INFOWEST.COM

REVISION: DESCRIPTION
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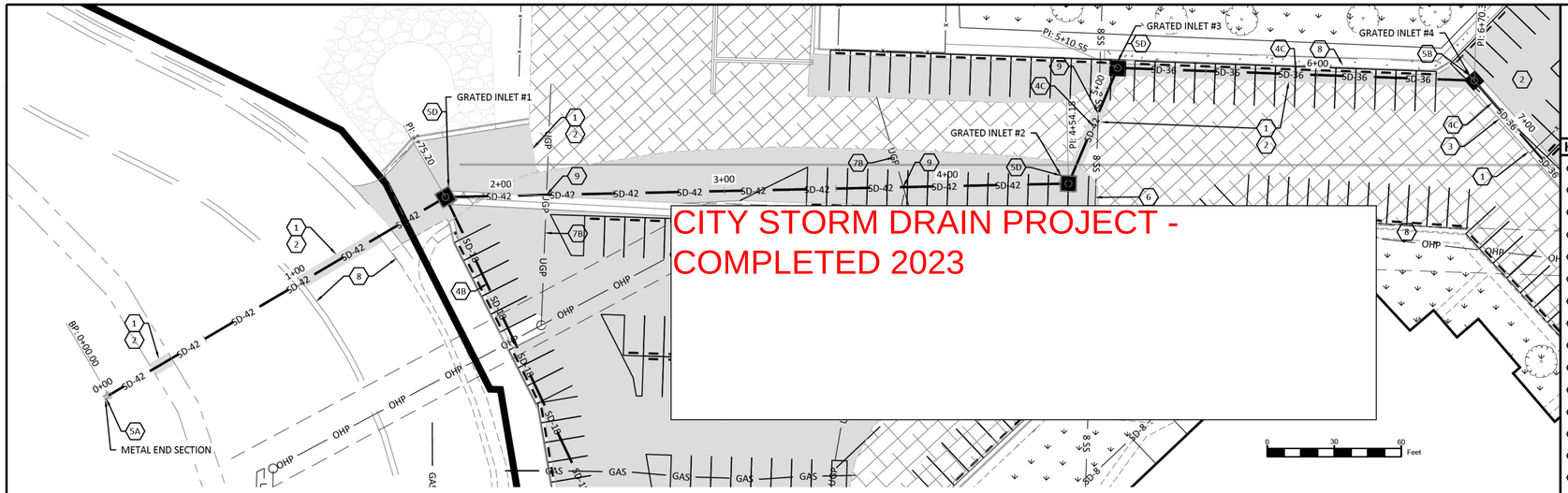
UTILITY PLAN FOR
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

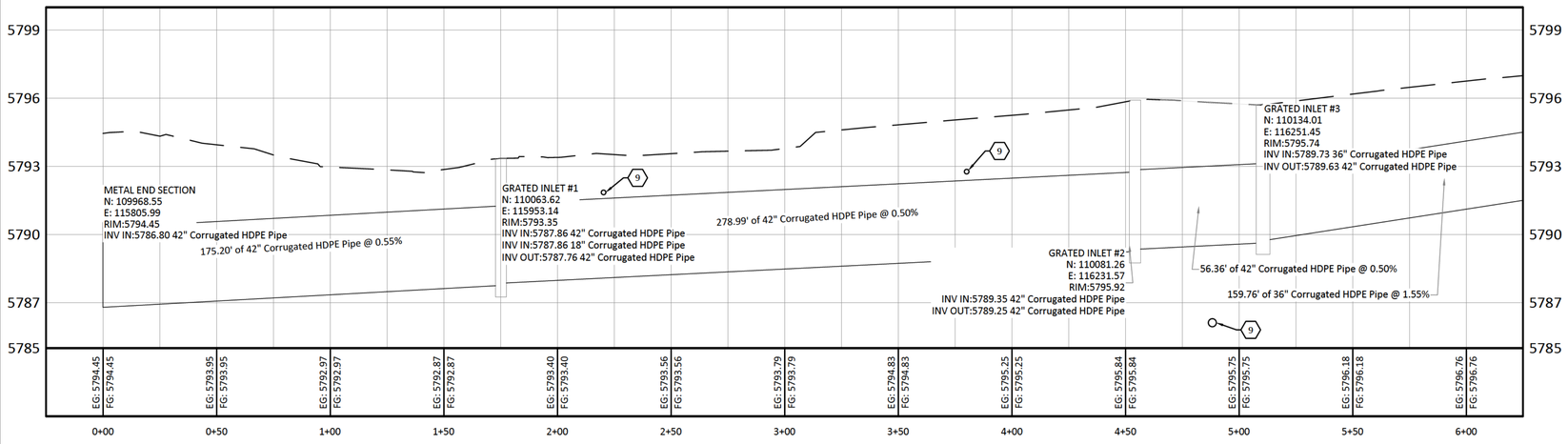
LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER
CHECKED BY: M.R. PLATT
DATE: Jun 09, 2023
SCALE: 1" = 50'

FILE: P:\Mike\Paiute Tribe\DWG\Paiute Tribe Improvement Plans 05042023.dwg



City Storm Drain PROFILE



PLAN AND PROFILE FOR

CEDAR CITY STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

KEYNOTES:

1. SAWCUT EXISTING PAVEMENT
2. NEW/REPLACED PAVEMENT
3. NEW 6-FOOT WIDE CROSS GUTTER (C2)
4A. ~~NEW 8-INCH STORM DRAIN LINE (R1)~~ N/A
4B. NEW 18-INCH STORM DRAIN LINE (R1)
4C. NEW 36-INCH STORM DRAIN LINE (R1)
4D. NEW 42-INCH STORM DRAIN LINE (R1)
5A. NEW METAL END SECTION (D4)
5B. NEW GRATED STORM DRAIN JUNCTION BOX TO CAPTURE ON SITE STORM WATER (60" SQ. INNER DIM.) (D5)
5C. ~~NEW STORM DRAIN MANHOLE (60" SQ. INNER DIM.) (D5)~~ N/A
5D. NEW GRATED STORM DRAIN JUNCTION BOX TO CAPTURE ON SITE STORM WATER (72" SQ. INNER DIM.) (D5)
5E. ~~NEW STORM DRAIN JUNCTION BOX (24" SQ. INNER DIM.) (D1)~~ N/A
6. EXISTING 8-INCH SEWER MAIN (R1)
7A. EXISTING OVERHEAD POWER LINE
7B. EXISTING UNDERGROUND POWER LINE
8. EXISTING CURB, GUTTER & SIDEWALK (C1 C6)
9. FIELD VERIFY DEPTH OF EXISTING UTILITY LINE PRIOR TO INSTALLATION OF THE PROPOSED STORM DRAIN LINE

LEGEND:

- PROJECT BOUNDARY
- (S) EXISTING SEWER MANHOLE
- 8 SS — EXISTING 8-INCH SEWER MAIN
- SL — PROPOSED SEWER LATERAL
- 8 W — EXISTING 8-INCH WATER MAIN
- W — PROPOSED WATER LATERAL
- EXISTING FIRE HYDRANT
- WATER VALVE
- WATER METER
- OHP — EXISTING OVERHEAD POWER LINE
- UGP — EXISTING UNDERGROUND POWER LINE
- EASEMENT
- SD-18 — EXISTING 18-INCH STORM DRAIN
- SD-8 — PROPOSED 8-INCH STORM DRAIN
- SD-18 — PROPOSED 18-INCH STORM DRAIN
- SD-36 — PROPOSED 36-INCH STORM DRAIN
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- PROPOSED STORM DRAIN MANHOLE
- PROPOSED GRATED JUNCTION BOX
- EXISTING TREES
- LANDSCAPED AREA
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED CURB, GUTTER, & SIDEWALK
- ~~5555~~ EXISTING CONTOUR (2-FT INTERVAL)
- 5555 FINISHED CONTOUR (2-FT INTERVAL)

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PLAN AND PROFILE FOR
CEDAR CITY STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

REGISTERED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY:
CJ WEAVER

CHECKED BY:
M.R. PLATT

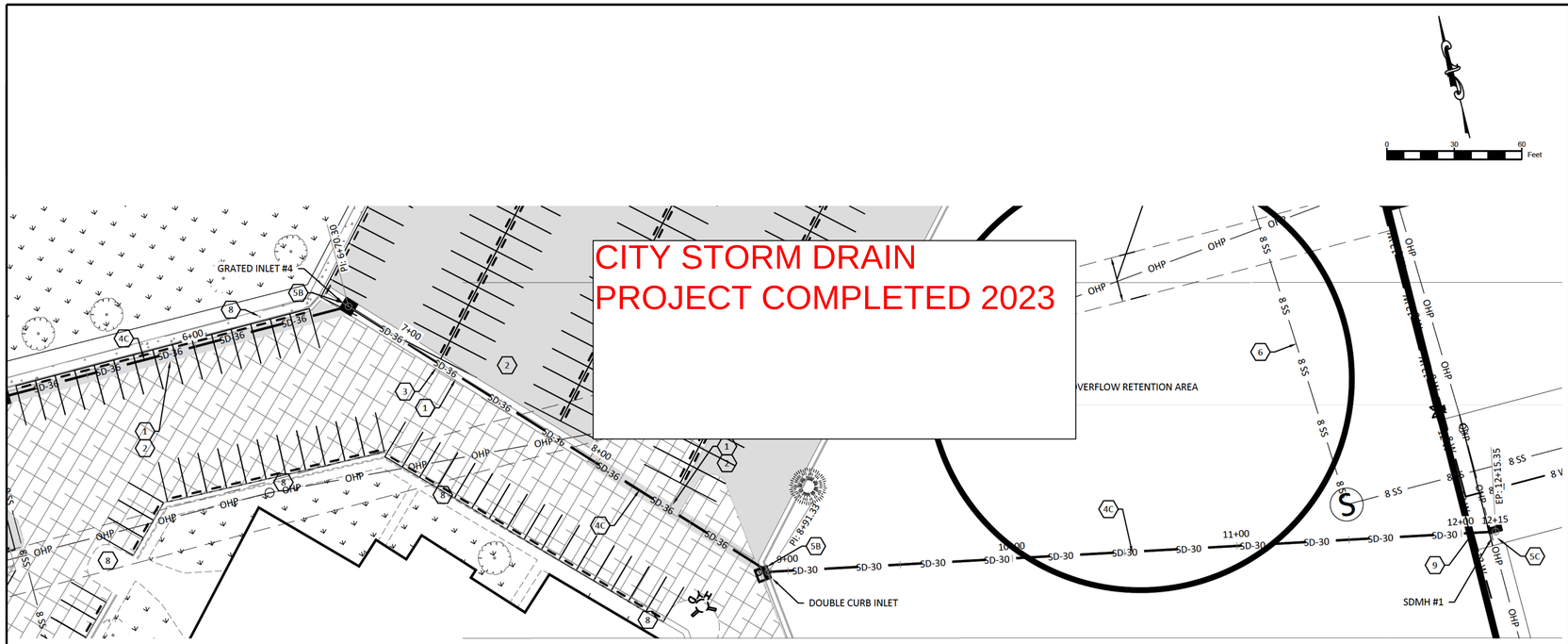
DATE:Jun 09, 2023

HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 3'

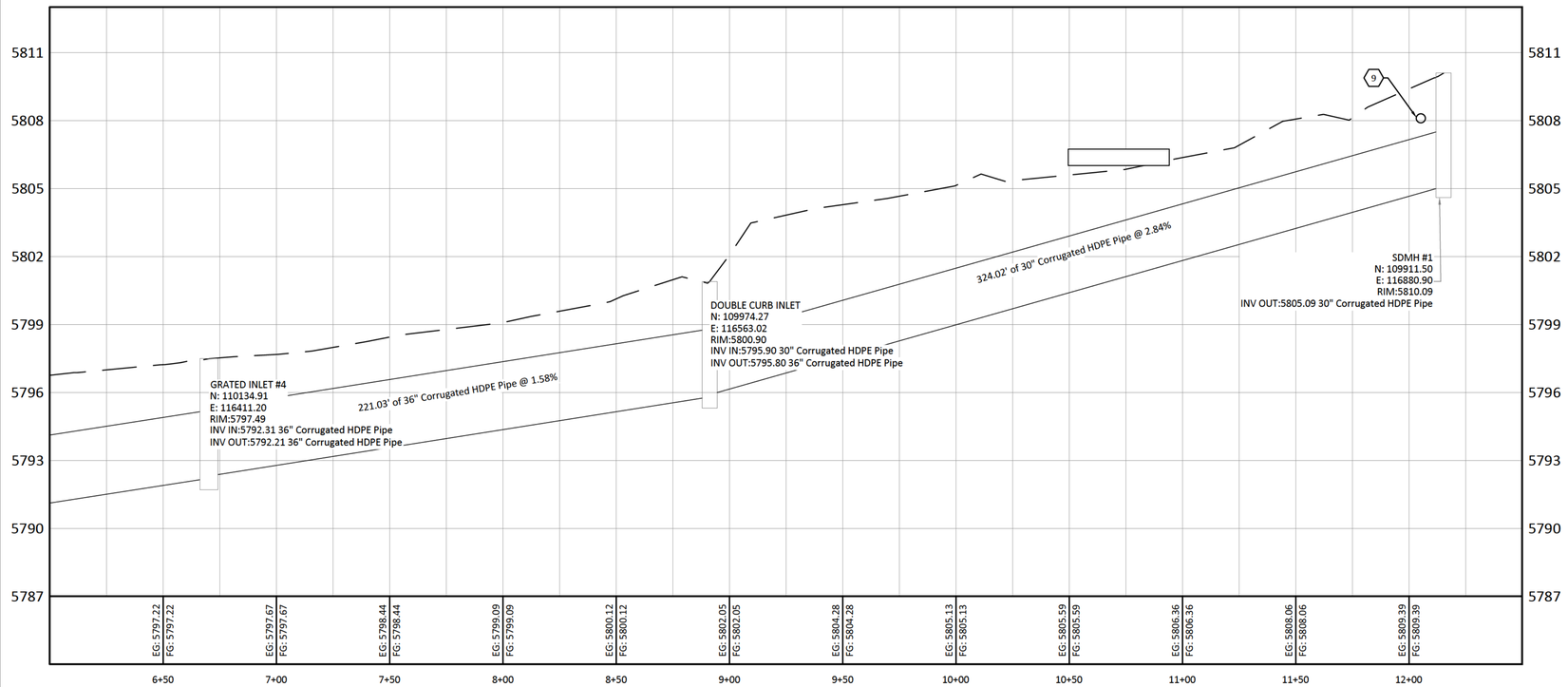
FILE: P:\Mike\Paiute Tribe\DWG\Paiute Tribe Improvement Plans 09242023.dwg

PLAN AND PROFILE FOR

CEDAR CITY STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH



City Storm Drain PROFILE



KEYNOTES:

1. SAWCUT EXISTING PAVEMENT
2. NEW/REPLACED PAVEMENT
3. NEW 6-FOOT WIDE CROSS GUTTER (C2)
4A. ~~NEW 8-INCH STORM DRAIN LINE (R1)~~ N/A
4B. ~~NEW 18-INCH STORM DRAIN LINE (R1)~~ N/A
4C. NEW 36-INCH STORM DRAIN LINE (R1)
4D. ~~NEW 42-INCH STORM DRAIN LINE (R1)~~ N/A
5A. ~~NEW METAL END SECTION (D4)~~ N/A
5B. NEW GRATED STORM DRAIN JUNCTION BOX TO CAPTURE ON SITE STORM WATER (60" SQ. INNER DIM.) (D5)
5C. NEW STORM DRAIN MANHOLE (60" SQ. INNER DIM.) (D5)
5D. ~~NEW STORM DRAIN MANHOLE (72" SQ. INNER DIM.) (D5)~~ N/A
5E. ~~NEW STORM DRAIN JUNCTION BOX (24" SQ. INNER DIM.) (D1)~~ N/A
8. EXISTING 8-INCH SEWER MAIN (R1)
7A. EXISTING OVERHEAD POWER LINE
7B. ~~EXISTING UNDERGROUND POWER LINE~~ N/A
8. EXISTING CURB, GUTTER & SIDEWALK (C1 C6)
9. FIELD VERIFY DEPTH OF EXISTING UTILITY LINE PRIOR TO INSTALLATION OF THE PROPOSED STORM DRAIN LINE

LEGEND:

- PROJECT BOUNDARY
- EXISTING SEWER MANHOLE
- 8 SS — EXISTING 8-INCH SEWER MAIN
- SL — PROPOSED SEWER LATERAL
- 8 W — EXISTING 8-INCH WATER MAIN
- W — PROPOSED WATER LATERAL
- EXISTING FIRE HYDRANT
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- 5555 — EXISTING CONTOUR (2-FT INTERVAL)
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CEDAR CITY STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
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CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

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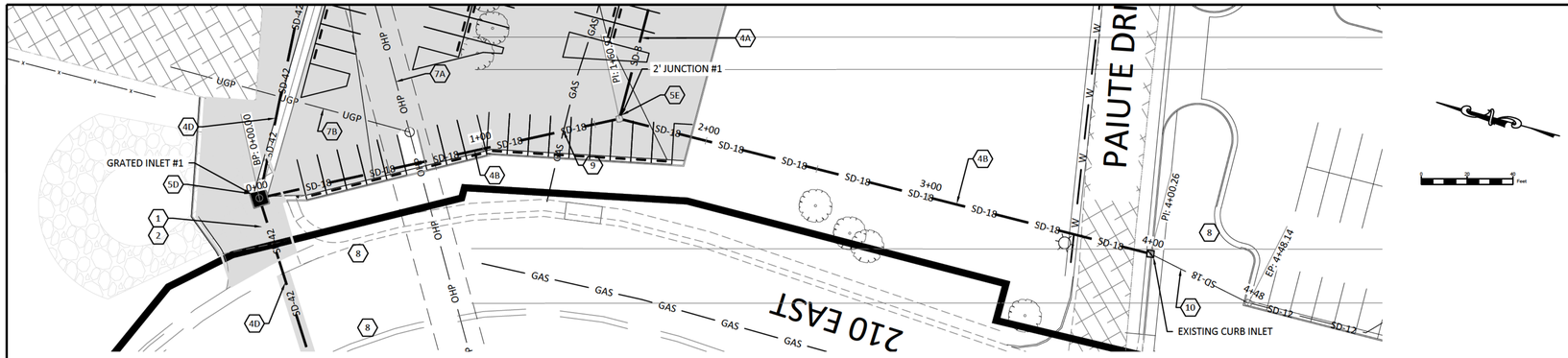
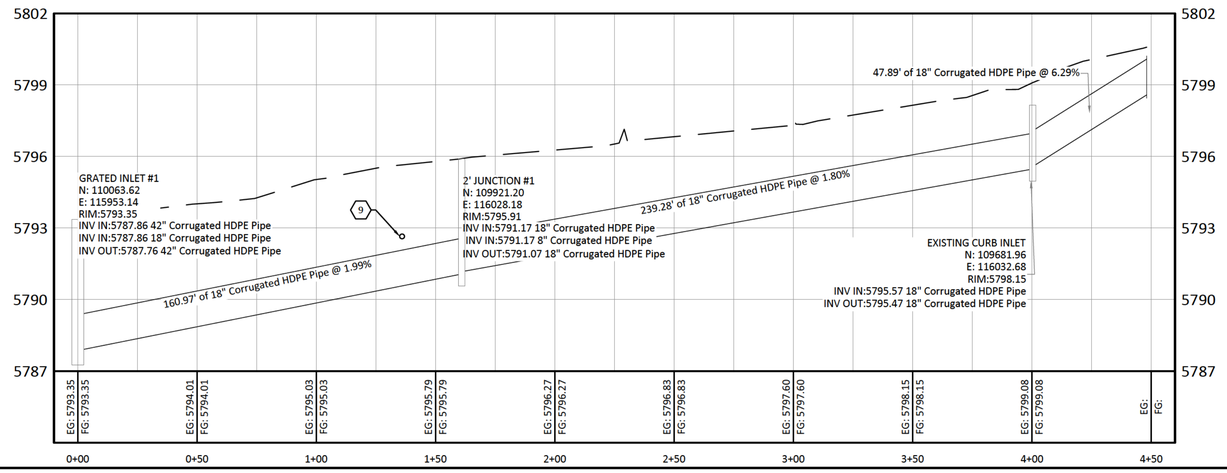
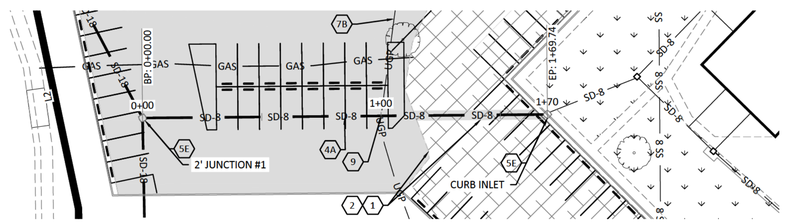
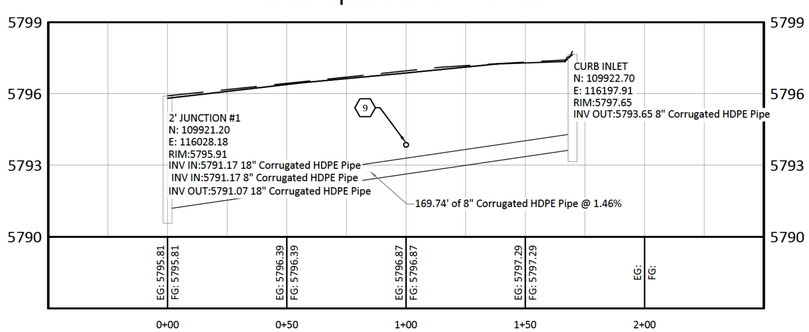


Four Points Medical Line PROFILE





Dounspout Line PROFILE



PLAN AND PROFILE FOR

FOUR POINTS MEDICAL STORM DRAIN & MAIN BUILDING DOWNSPOUT - INLET STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SEC. 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

KEYNOTES:

1. SAWCUT EXISTING PAVEMENT
2. NEW/REPLACED PAVEMENT
3. ~~NEW 6-FOOT WIDE CROSS GUTTER (C2)~~ N/A
4A. NEW 8-INCH STORM DRAIN LINE (R1)
4B. NEW 18-INCH STORM DRAIN LINE (R1)
4C. ~~NEW 36-INCH STORM DRAIN LINE (R1)~~ N/A
4D. NEW 42-INCH STORM DRAIN LINE (R1)
6A. ~~NEW METAL END SECTION (D4)~~ N/A
5B. ~~NEW GRATED STORM DRAIN JUNCTION BOX TO CAPTURE ON-SITE STORM WATER (60" SQ. INNER DIM.) (D5)~~ N/A
6D. ~~NEW STORM DRAIN MANHOLE (60" SQ. INNER DIM.) (D5)~~ N/A
5D. NEW STORM DRAIN MANHOLE (72" SQ. INNER DIM.) (D5)
5E. NEW STORM DRAIN JUNCTION BOX (24" SQ. INNER DIM.) (D1)
8. ~~EXISTING 8-INCH SEWER MAIN (R1)~~ N/A
7A. EXISTING OVERHEAD POWER LINE
7B. EXISTING UNDERGROUND POWER LINE
8. EXISTING CURB, GUTTER & SIDEWALK (C1 C6)
9. FIELD VERIFY DEPTH OF EXISTING UTILITY LINE PRIOR TO INSTALLATION OF THE PROPOSED STORM DRAIN LINE
10. EXISTING 18-INCH STORM DRAIN LINE

LEGEND:

PROJECT BOUNDARY	SD-18 PROPOSED 18-INCH STORM DRAIN
EXISTING SEWER MANHOLE	SD-36 PROPOSED 36-INCH STORM DRAIN
8 SS EXISTING 8-INCH SEWER MAIN	SD-42 PROPOSED 42-INCH STORM DRAIN
SL PROPOSED SEWER LATERAL	PROPOSED STORM DRAIN MANHOLE
8 W EXISTING 8-INCH WATER MAIN	PROPOSED GRATED JUNCTION BOX
W PROPOSED WATER LATERAL	EXISTING TREES
EXISTING FIRE HYDRANT	LANDSCAPED AREA
WATER VALVE	EXISTING PAVEMENT
WATER METER	PROPOSED PAVEMENT
OHP EXISTING OVERHEAD POWER LINE	PROPOSED CURB, GUTTER, & SIDEWALK
UGP EXISTING UNDERGROUND POWER LINE	5555 EXISTING CONTOUR (2-FT INTERVAL)
EASEMENT	5555 FINISHED CONTOUR (2-FT INTERVAL)
SD-18 EXISTING 18-INCH STORM DRAIN	
SD-8 PROPOSED 8-INCH STORM DRAIN	

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195 N. 100 E.
CEDAR CITY, UT 84720
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PLAN AND PROFILE FOR
FOUR POINTS MEDICAL STORM DRAIN & MAIN BUILDING DOWNSPOUT - INLET STORM DRAIN
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 11, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER
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MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER
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SCALE: 1" = 30'

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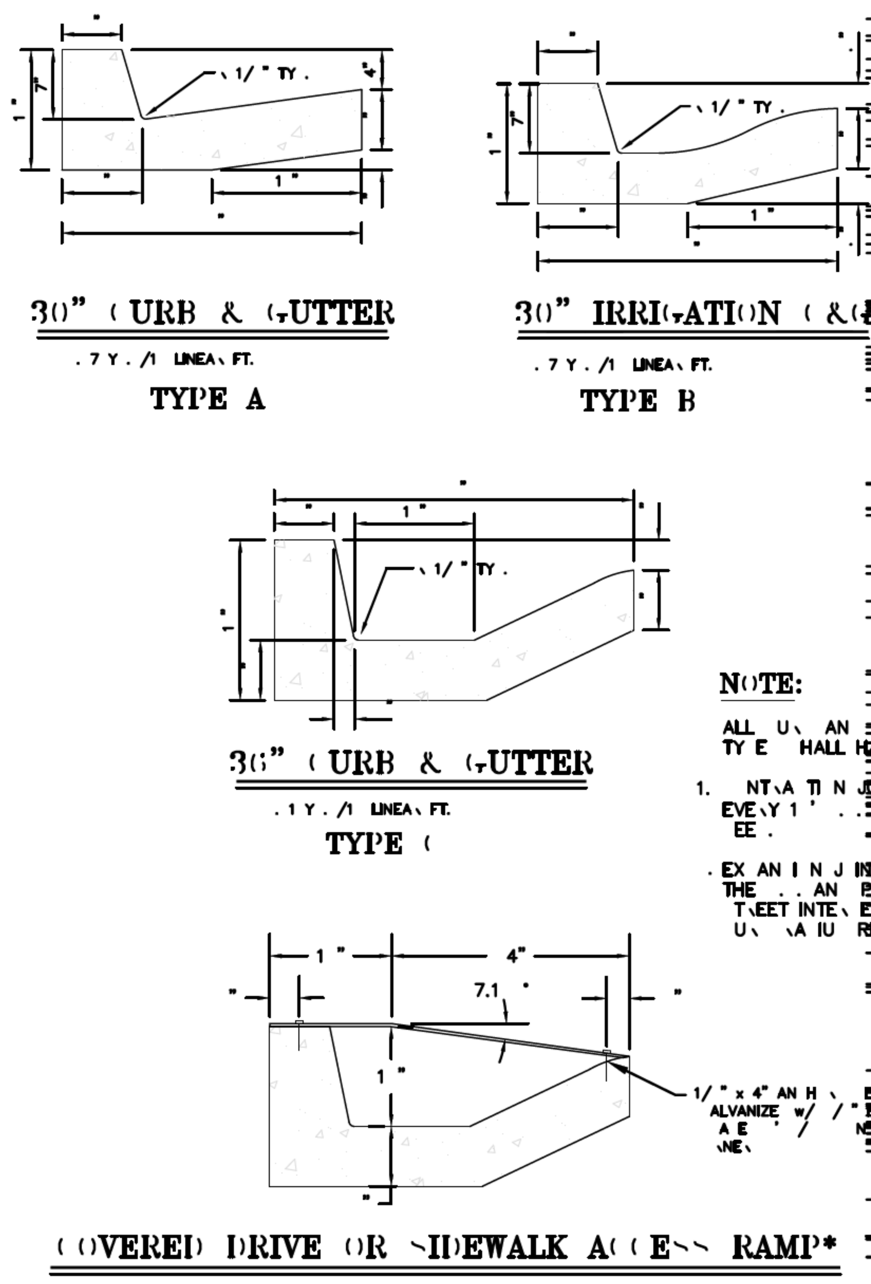
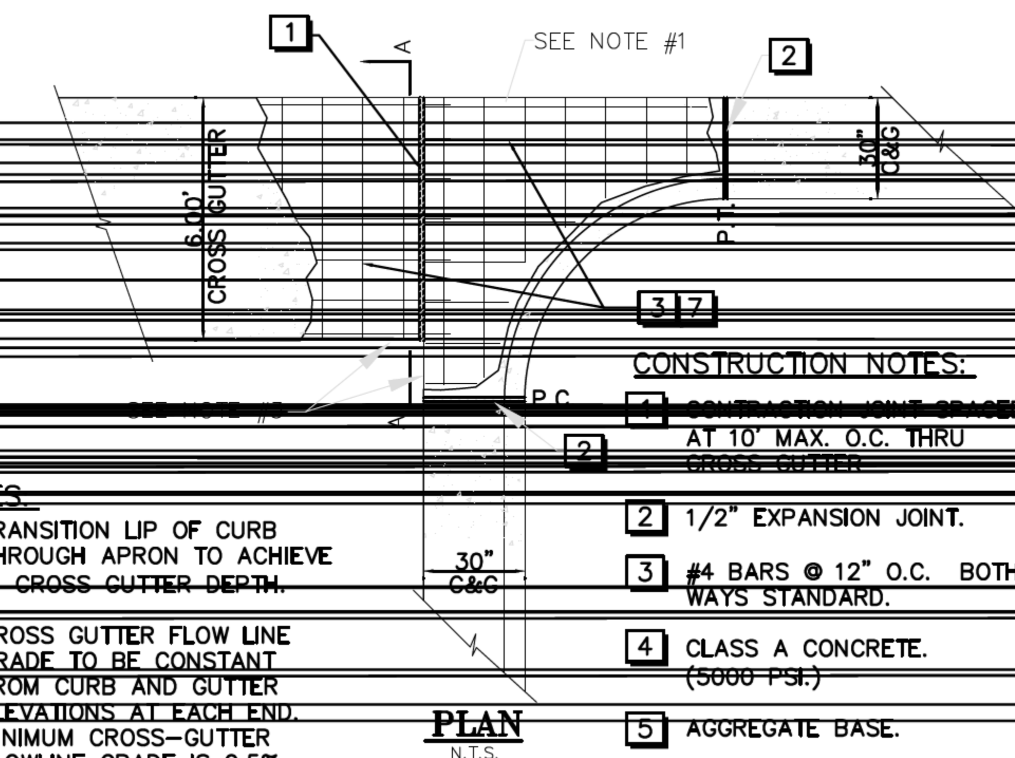


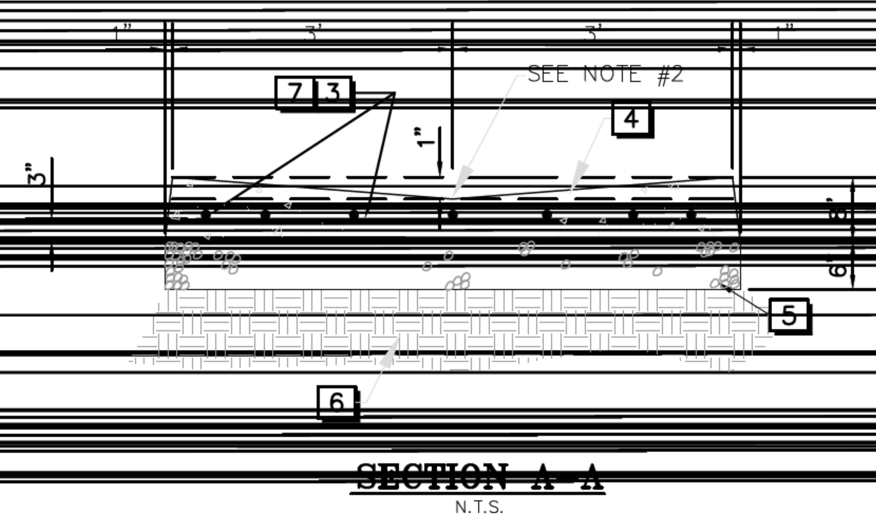
NOTE:
ALL CURB AND GUTTER TYPE SHALL HAVE:
1. CONTRACTION JOINTS EVERY 10' ... 1/2" DEEP.
2. EXPANSION JOINTS AT THE P.C. AND P.T. OF A STREET INTERSECTION CURB RADIUS RETURN.

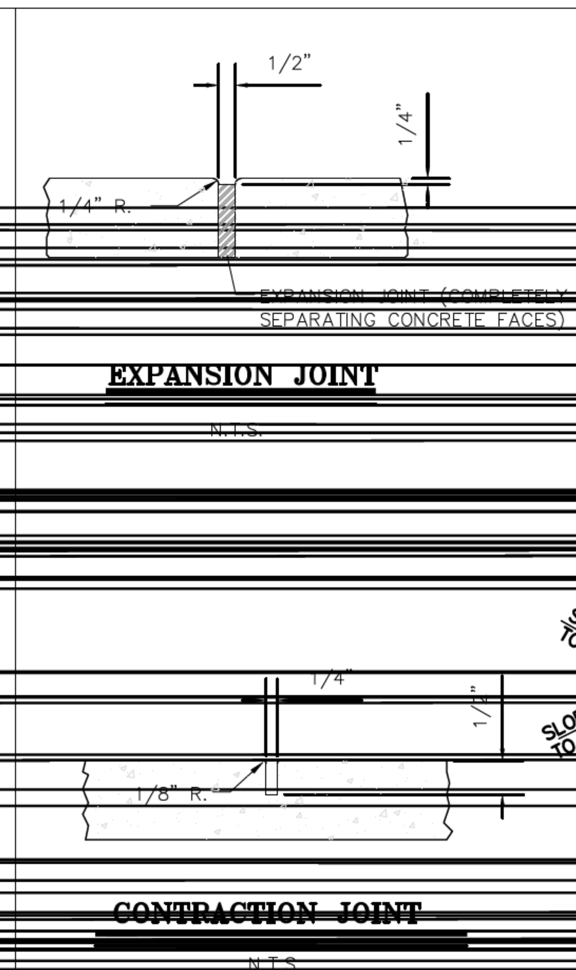
UNIT ... GUTTER



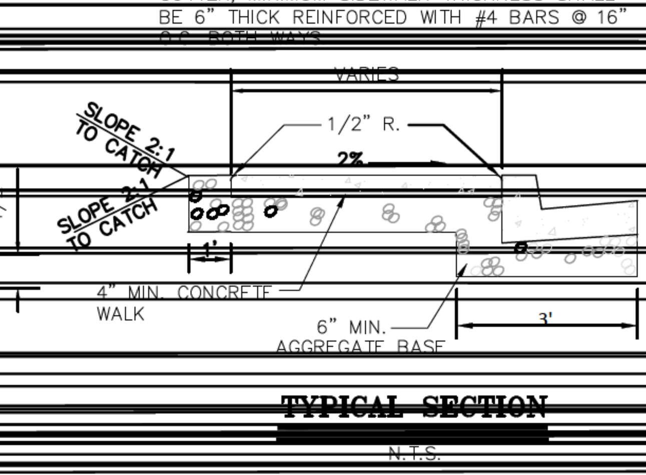
NOTES:
1. TRANSITION LIP OF CURB THROUGH APRON TO ACHIEVE 1" CROSS GUTTER DEPTH.
2. CROSS GUTTER FLOW LINE GRADE TO BE CONSTANT FROM CURB AND GUTTER ELEVATIONS AT EACH END. MINIMUM CROSS-GUTTER FLOWLINE GRADE IS 0.5% SLOPE.
3. ONLY 90° CORNERS WILL BE ALLOWED WHERE ASPHALT CONNECTS TO CROSS GUTTER. CONCRETE APRONS MAY BE REQUIRED.

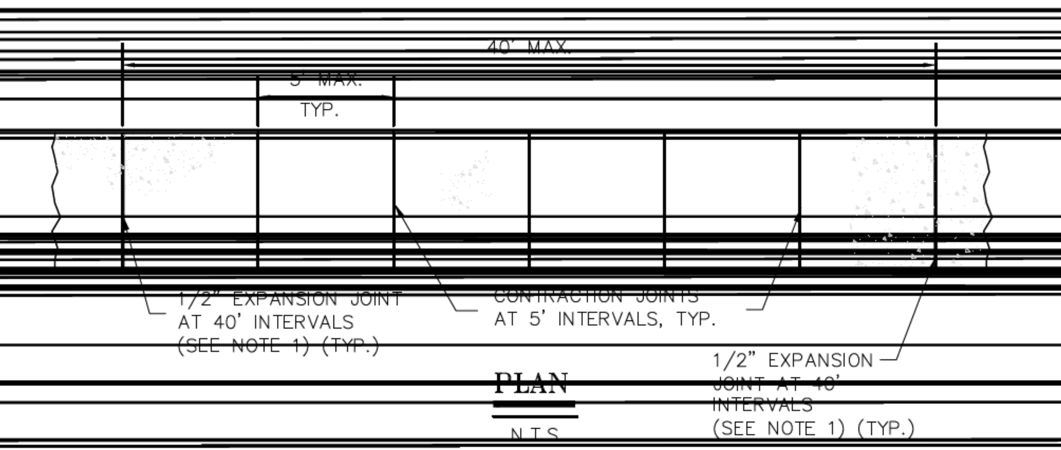
CONSTRUCTION NOTES:
1. CONTRACTION JOINT SPACED AT 10' MAX. O.C. THRU CROSS GUTTER
2. 1/2" EXPANSION JOINT.
3. #4 BARS @ 12" O.C. BOTH WAYS STANDARD.
4. CLASS A CONCRETE. (5000 PSI.)
5. AGGREGATE BASE.
6. COMPACTED SUBGRADE.
7. REBAR MATS TO BE SUPPORTED ON DOBIE BLOCKS OR REBAR CHAIRS SPACED 4 FEET O.C. EACH WAY.





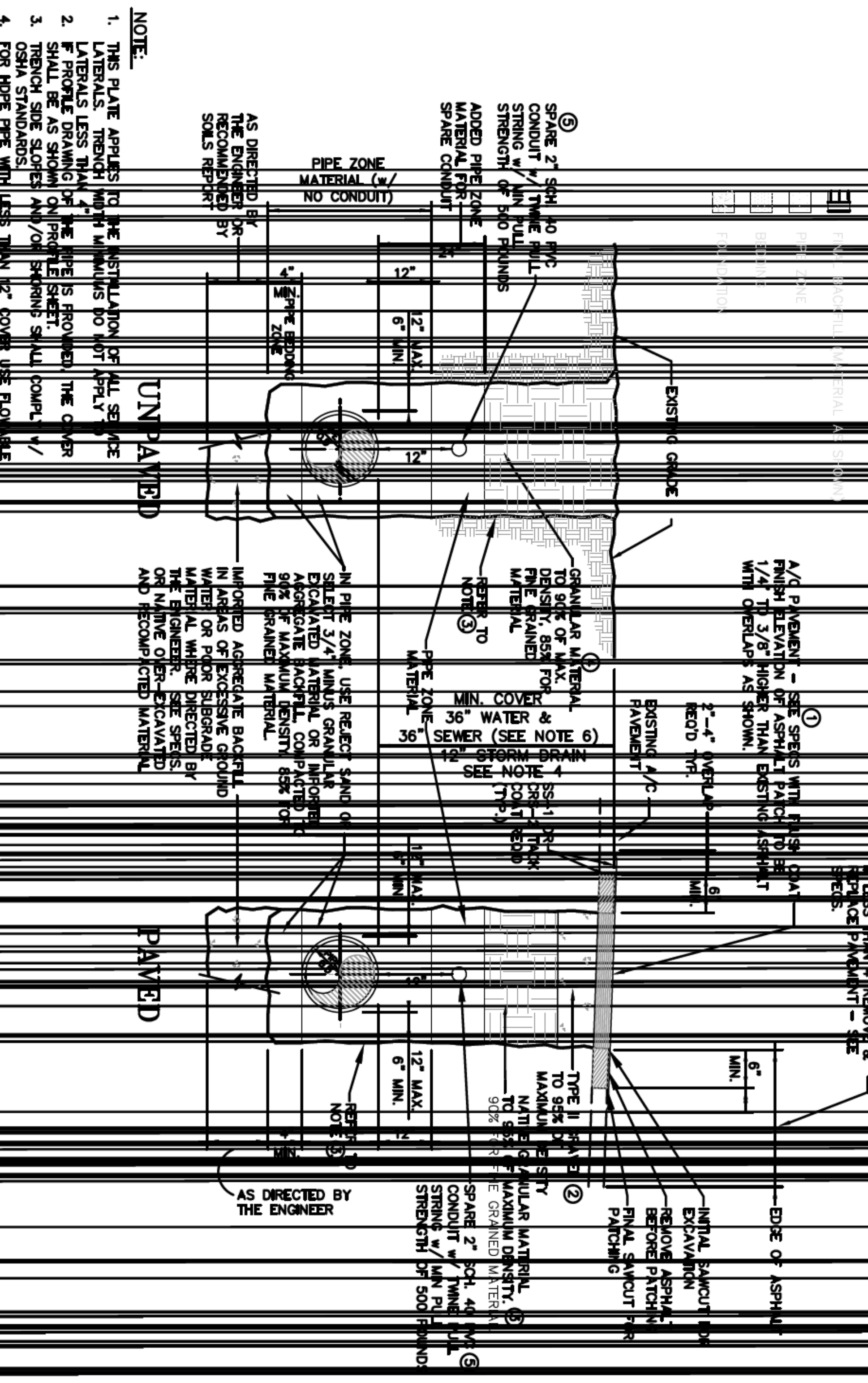
NOTE:
1. ON ALL CURB RETURNS EXPANSION JOINTS SHALL BE PLACED AT P.C. AND P.T. OF THE SIDEWALK.
2. ANY REPLACED SECTIONS OF SIDEWALK SHALL HAVE AN EXPANSION JOINT INSTALLED TO MAINTAIN THE 40' MAX. SPACING.
3. PROVIDE 5'x5' PASSING SPACES AT 200' MAX. INTERVALS WHERE SIDEWALK WIDTH IS LESS THAN 5'. DRIVEWAYS & OTHER PAVED AREAS MAY BE USED AS A PASSING SPACE WHERE A MINIMUM 5' WIDE AREA IS PROVIDED, & 2% CROSS-SLOPE REQUIREMENT IS MET.
4. THE 5'x5' PASSING SPACE IS REQUIRED IN ALL ZONES WHERE SIDEWALK IS LOCATED.
5. WHERE SIDEWALKS CROSS DRIVEWAY APPROACHES BEHIND A TYPE D CURB & GUTTER, MINIMUM SIDEWALK THICKNESS SHALL BE 6" THICK REINFORCED WITH #4 BARS @ 16" O.C. BOTH WAYS.



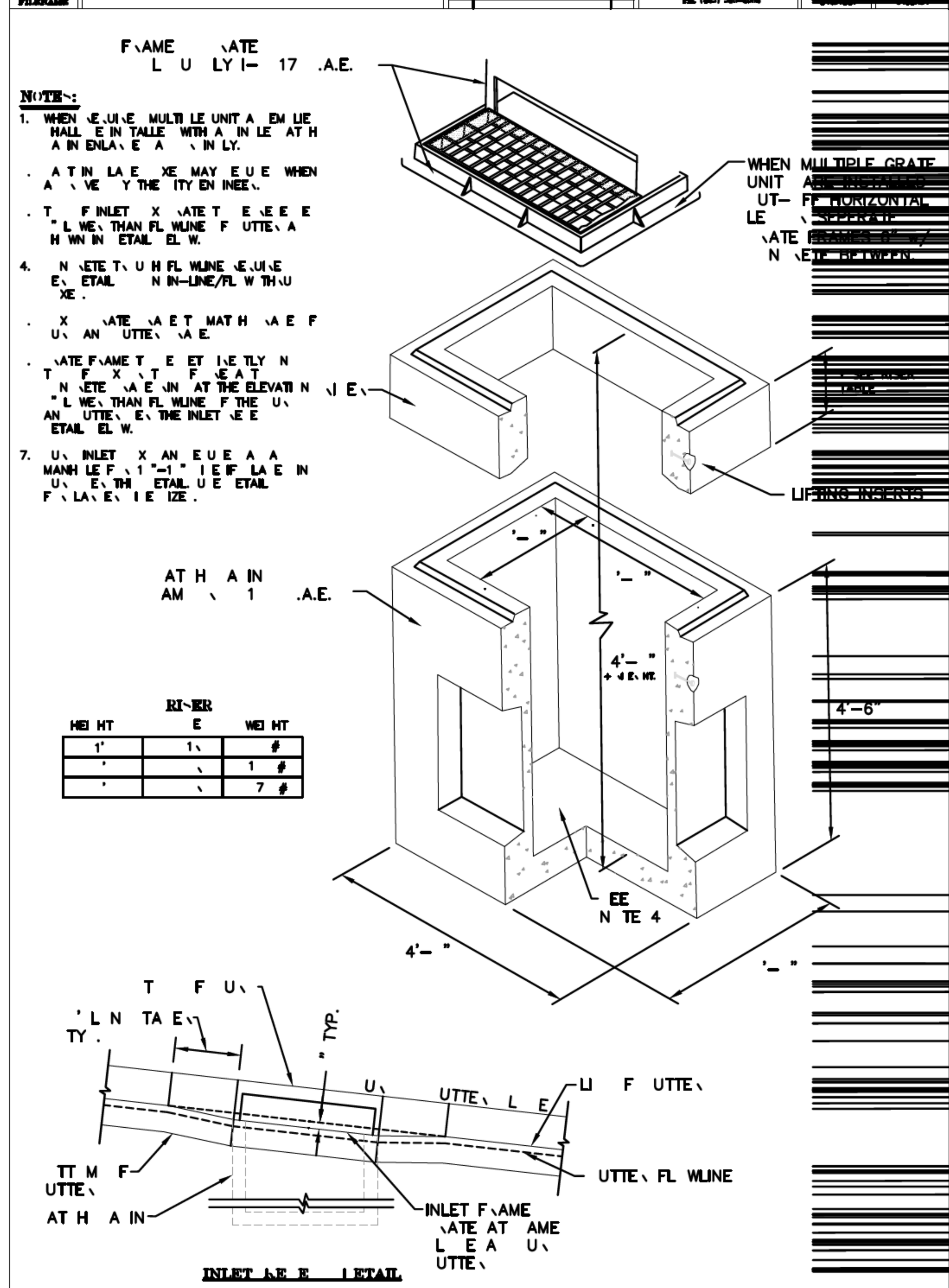


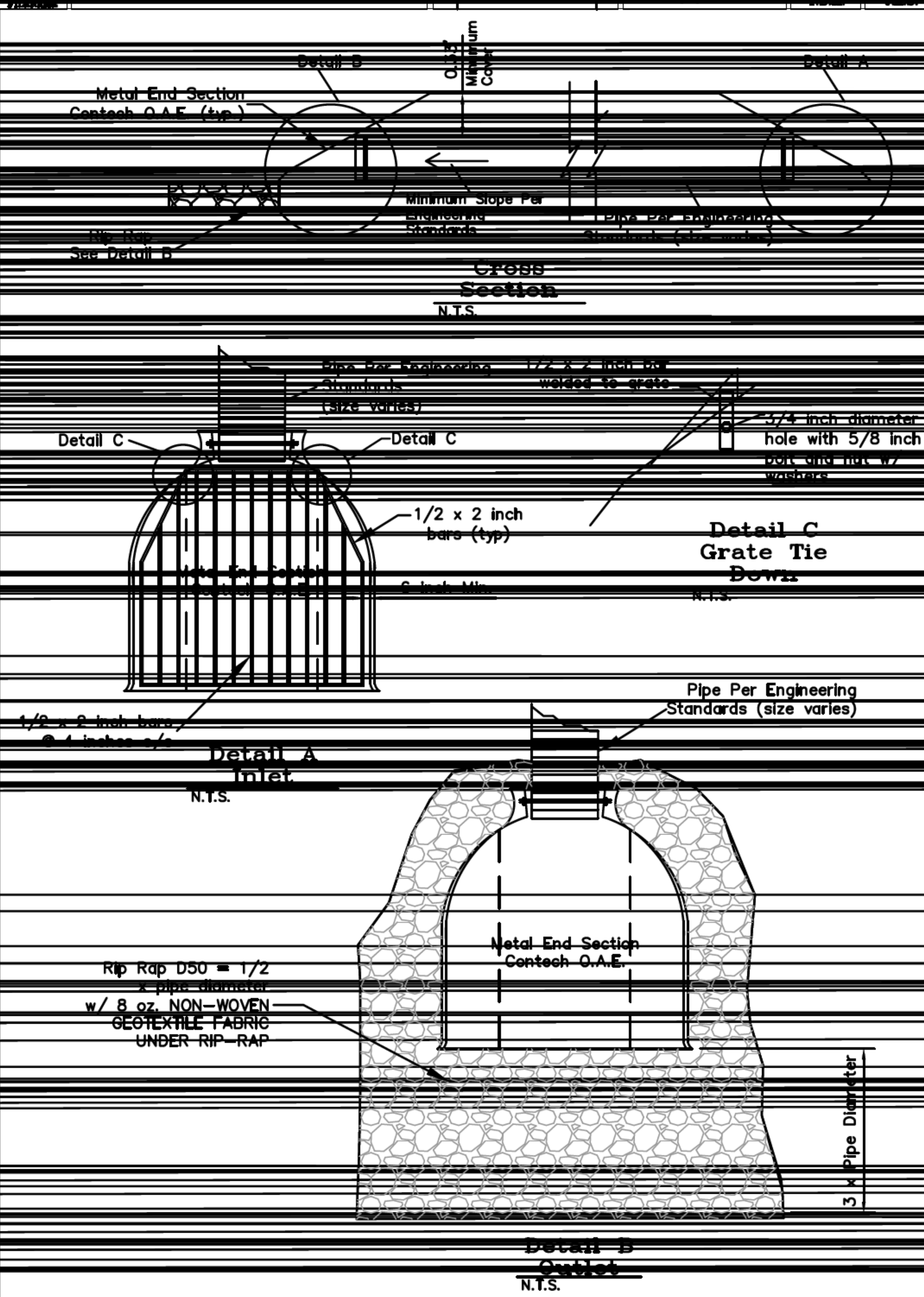
NOTE:
1. THIS PLATE APPLIES TO THE INSTALLATION OF ALL SERVICE LATERALS. TRENCH WIDTH MINIMUMS DO NOT APPLY TO LATERALS LESS THAN 4".
2. IF PROFILE DRAWING OF THE PIPE IS PROVIDED, THE COVER SHALL BE AS SHOWN ON PROFILE SHEET.
3. TRENCH SIDE SLOPES AND/OR SHORING SHALL COMPLY w/ OSHA STANDARDS.
4. FOR HDPE PIPE WITH LESS THAN 12" COVER USE FLOWABLE FILL TO BOTTOM OF ASPHALT FROM BOTTOM OF PIPE.
5. 2" SPARE CONDUIT IS ONLY REQUIRED ON CITY CAPITAL PROJECTS. 2" SPARE CONDUIT MUST TERMINATE IN A JUNCTION BOX LOCATED OUTSIDE THE ROADWAY.
6. MINIMUM DEPTH OF SEWER MANHOLES IS 42" OF COVER OVER TOP OF PIPE.

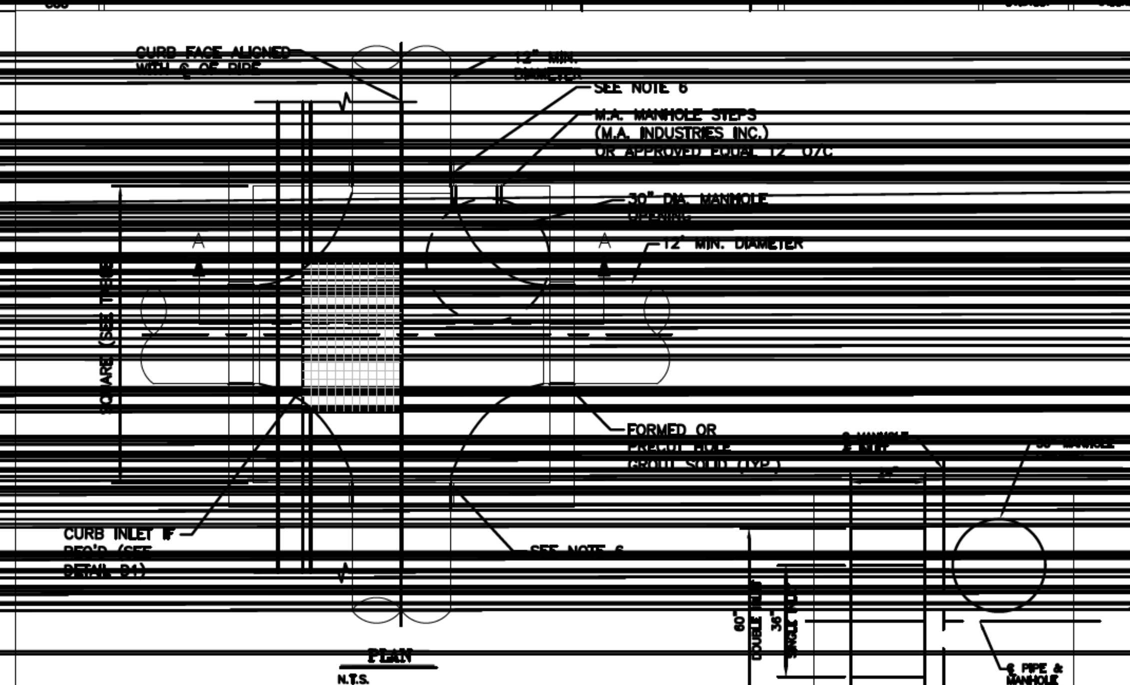
TYPICAL TRENCH DETAILS
N.T.S.



UNI INLET BOX

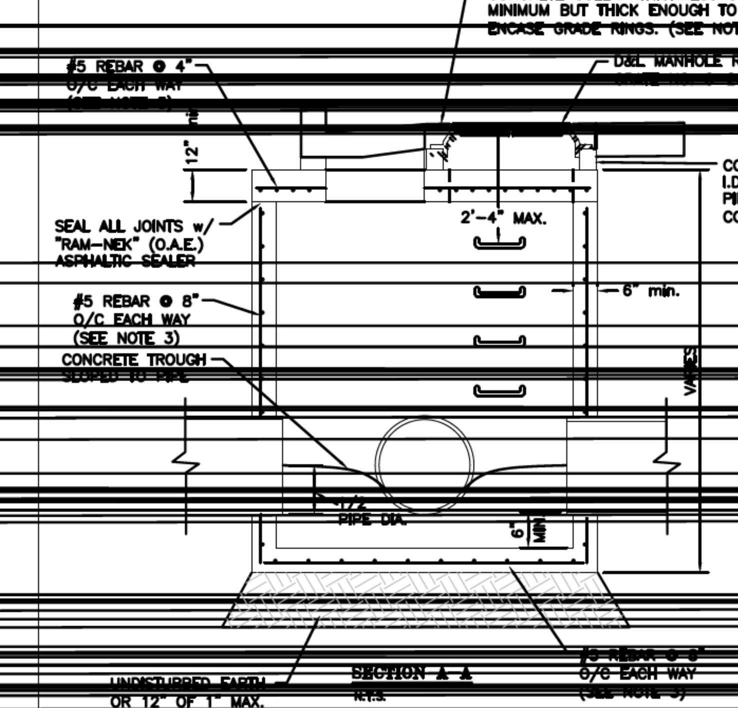






	(SQ. INSIDE DIM.)
12"–18"	48"
20"–36"	60"
42"–48"	72"
> 48"	84"

SEE NOTE 1



NOTE:
1. CAN USE INLET BOX AS A MANHOLE FOR 12"-18" PIPE IF PLACED IN CURB PER DETAIL D1.
2. MANHOLES IN ROADWAYS REQUIRE CONC. COLLAR. MANHOLES IN UNIMPROVED AREAS SHALL BE SET 6 TO 12 INCHES ABOVE FINISH GRADE. (NO CONC. COLLAR REQ'D)
3. PRE-CAST MANHOLE TO HAVE H-20 LOAD RATING CERTIFICATION.
4. INSTALL NON-SHRINK GROUT BETWEEN ALL CONCRETE GRADE RINGS AND MANHOLE COVER RING.
5. MANHOLE LID, RING AND CONCRETE COLLAR TO BE CENTERED ON MANHOLE OPENING AND SET 1/4 INCH BELOW TOP OF ASPHALT.
6. MANHOLE INLET PIPE INVERT TO BE 0.20 FT HIGHER THAN OUT PIPE INVERT.

CEDAR CITY
MINIMUM TESTING REQUIREMENTS

DESCRIPTION	TEST / QUANTITY	QUANTITY	TESTS REQ'D
ROAD EMBANKMENT DENSITY TESTS	1/500 C.Y.	C.Y.	
ROAD SUBGRADE DENSITY TESTS	1/1,000 S.Y.	S.Y.	
TRENCH DENSITY TESTS			
STORM DRAINS / CULVERTS	2/200 L.F. OF TRENCH	L.F.	
STORM DRAIN MANHOLES / INLET BOX	3/MANHOLE OR BOX	EACH	
IRRIGATION LINE	2/200 L.F. OF TRENCH	L.F.	
WATER LINE (INCLUDES F. H. & SERVICE LATERALS)	2/200 L.F. OF TRENCH	L.F.	
SEWER LINE (INCLUDES SERVICE LATERALS)	2/200 L.F. OF TRENCH	L.F.	
SEWER MANHOLE	5/EACH MANHOLE	EACH	
VALVES	2/VALVE OR VALVE SET	EACH	
UTILITY CONDUITS	2/200 L.F. OF TRENCH	L.F.	
ROAD PIT RUN DENSITY TESTS	1/7,000 S.F.	S.F.	
ROAD PIT RUN THICKNESS TESTS	1/5,000 S.F.	S.F.	
ROAD BASE COURSE DENSITY TESTS	1/7,000 S.F.	S.F.	
ROAD BASE THICKNESS TESTS	1/5,000 S.F.	S.F.	
CURB/GUTTER BASE DENSITY TESTS	1/300 L.F.	L.F.	
SIDEWALK BASE DENSITY TESTS	1/300 L.F.	L.F.	
ASPHALT EXTRACTION TESTS	1/500 TONS OR 1 PER DAY WHICHEVER IS MORE	TON	
ASPHALT DENSITY TESTS	1/7,000 S.F.	S.F.	
ASPHALT THICKNESS TESTS	1/10,000 S.F.	S.F.	
CONCRETE CYLINDER BREAKS	3/50 C.Y.	C.Y.	
CONCRETE AIR ENTRAINMENT	1 IF INITIAL TEST PASSES	LOADS	
CONCRETE SLUMP TESTS	1 IF INITIAL TEST PASSES	LOADS	
ROAD BASE GRADATION TEST	1/15,000 S.F.	S.F.	
CURB & GUTTER BASE COURSE GRAD.	1/2,000 L.F.	L.F.	
CURB & GUTTER THICKNESS TEST	1/200 L.F.	L.F.	
SIDEWALK THICKNESS TEST	1/200 L.F.	L.F.	

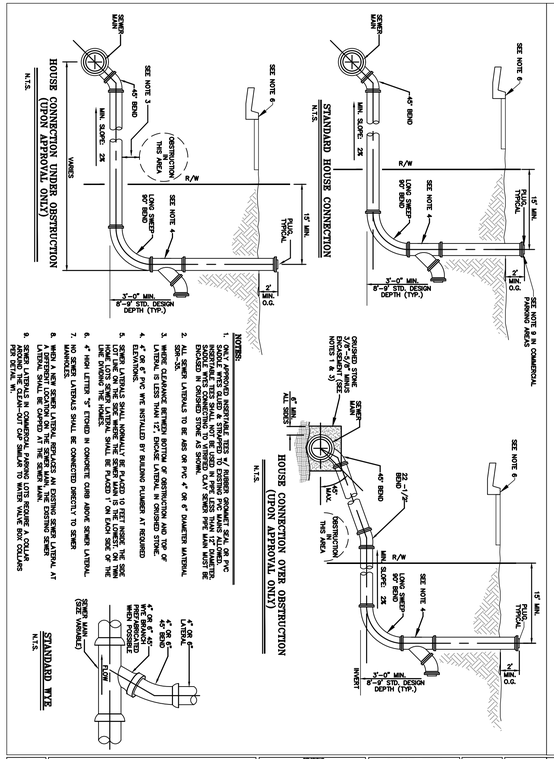
PLATT & PLATT, INC
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
195 N. 100 E.
CEDAR CITY, UT 84720
TEL: (435) 586-6151
FAX: (435) 586-8567
EMAIL: PLATT@INFOWEST.COM

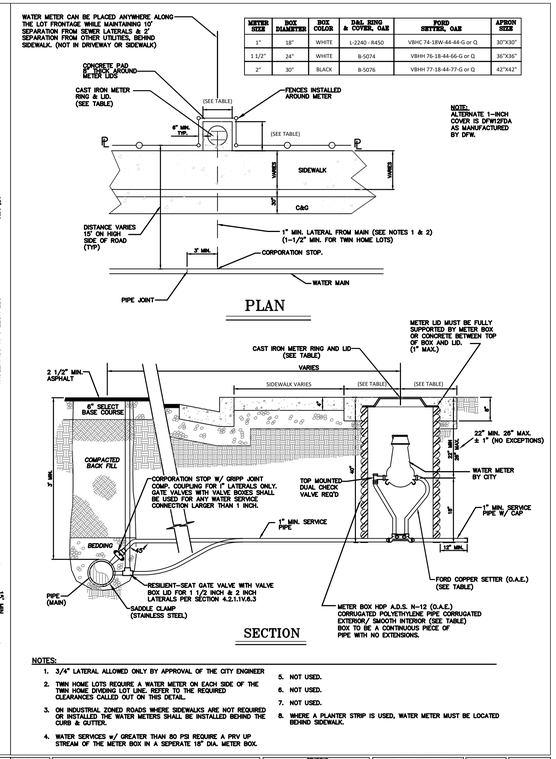
DETAIL SHEET
THE PAIUTE INDIAN TRIBE OF UTAH
WITHIN SECTION 1, T. 36 S., R. 11 W., SLB&M
CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER 9054682 MICHAEL ROBERT PLATT STATE OF UTAH

DRAWN BY: CJ WEAVER
CHECKED BY: M.R. PLATT
DATE: Jun 09, 2023

FILE: P:\Mike\Paiute Tribe\DWG\Paiute Tribe Improvement Plans 05042023.dwg





METER SIZE	BOX DIAMETER	BOX COLOR	D&L RING & COVER, OAE	FORD SETTER, OAE	APRON SIZE
1"	18"	WHITE	L-2240 - R450	VBHC 74-1BW-44-44-G or Q	30"X30"
1 1/2"	24"	WHITE	B-5074	VBHH 76-1B-44-66-G or Q	36"X36"
2"	30"	BLACK	B-5076	VBHH 77-1B-44-77-G or Q	42"X42"

NOTE: ALTERNATE 1-INCH COVER IS DFW12FDA AS MANUFACTURED BY DFW.

NOTES:
1. 3/4" LATERAL ALLOWED ONLY BY APPROVAL OF THE CITY ENGINEER
2. TWIN HOME LOTS REQUIRE A WATER METER ON EACH SIDE OF THE TWIN HOME DIVIDING LOT LINE. REFER TO THE REQUIRED CLEARANCES CALLED OUT ON THIS DETAIL.
3. ON INDUSTRIAL ZONED ROADS WHERE SIDEWALKS ARE NOT REQUIRED OR INSTALLED THE WATER METERS SHALL BE INSTALLED BEHIND THE CURB & GUTTER.
4. WATER SERVICES w/ GREATER THAN 80 PSI REQUIRE A PRV UP STREAM OF THE METER BOX IN A SEPERATE 18" DIA. METER BOX.
5. NOT USED.
6. NOT USED.
7. NOT USED.
8. WHERE A PLANTER STRIP IS USED, WATER METER MUST BE LOCATED BEHIND SIDEWALK.

DRAWING NO.	TITLE	REVISIONS	CEDAR CITY	DESIGN	DATE
S1	SEWER LATERAL	NO. DESCRIPTION BY	10 NORTH MAIN STREET CEDAR CITY, UTAH 84720 PH. (435) 586-4966	N.T.S	7/2021
PLAN S01				DRAWN T.B.M.	CHECKED J.A.S.

DRAWING NO.	TITLE	REVISIONS	CEDAR CITY	DESIGN	DATE
W5	1"-2" WATER METER	NO. DESCRIPTION BY	10 NORTH MAIN STREET CEDAR CITY, UTAH 84720 PH. (435) 586-4966	N.T.S.	7/2021
PLAN W05				DRAWN T.B.M.	CHECKED J.A.S.

STORM WATER IMPROVEMENTS
CONTRIBUTING AREAS AND REQUIRED PIPE CAPACITY CALCULATIONS

PROJECT: Paiute Tribe
Total
Grated Inlet #5 373,864
Rational Method Calculations

SURFACE TYPE	Area (SF)	AREA (Ac.)	RATIONAL COEFFICIENT (C)	A * C	ALLOWABLE RUNOFF (CFS)	INTENSITY	Q
Buildings	22675	0.52	0.9	0.468	0.104		
Pavement	57510	1.32	0.9	1.188	0.264		
Concrete	3160	0.07	0.9	0.065	0.015		
Landscape	290519	6.67	0.2	1.334	1.334		
TOTALS		**8.58**	**0.36**	**3.056**	**1.717**	1.45	4.43

For existing condition the Rational Coefficient = 0.3, However Cedar City only allows 0.2 for developed property

STORM WATER IMPROVEMENTS
CONTRIBUTING AREAS AND REQUIRED PIPE CAPACITY CALCULATIONS

PROJECT: Paiute Tribe
Total
Grated Inlets #4 - #5 718,916
Rational Method Calculations

SURFACE TYPE	Area (SF)	AREA (Ac.)	RATIONAL COEFFICIENT (C)	A * C	ALLOWABLE RUNOFF (CFS)	INTENSITY	Q
Buildings	45906	1.05	0.9	0.948	0.211		
Pavement	131060	3.01	0.9	2.708	0.602		
Concrete	8627	0.20	0.9	0.178	0.040		
Landscape	533323	12.24	0.2	2.449	2.449		
TOTALS		**16.50**	**0.38**	**6.283**	**3.301**	1.45	9.11

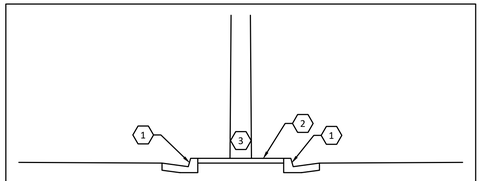
For existing condition the Rational Coefficient = 0.3, However Cedar City only allows 0.2 for developed property

STORM WATER IMPROVEMENTS
CONTRIBUTING AREAS AND REQUIRED PIPE CAPACITY CALCULATIONS

PROJECT: Paiute Tribe
Total
Grated Inlets #2 - #5 802,283
Rational Method Calculations

SURFACE TYPE	Area (SF)	AREA (Ac.)	RATIONAL COEFFICIENT (C)	A * C	ALLOWABLE RUNOFF (CFS)	INTENSITY	Q
Buildings	63726	1.46	0.9	1.317	0.293		
Pavement	163849	3.76	0.9	3.385	0.752		
Concrete	17277	0.40	0.9	0.357	0.079		
Landscape	557431	12.80	0.2	2.559	2.559		
TOTALS		**18.42**	**0.41**	**7.618**	**3.684**	1.45	11.05

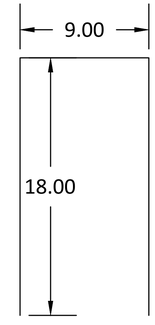
For existing condition the Rational Coefficient = 0.3, However Cedar City only allows 0.2 for developed property



WALKWAY DETAIL

1. 2.5' WIDE CATCH CURB
2. 6' WIDE CONCRETE WALKWAY
3. EXISTING POWER POLE

NOTES:
1. THE EXISTING TOPOGRAPHY DIRECTS STORM WATER TOWARDS A SWALE ALONG THE SOUTH EDGE OF THE EXISTING PAVEMENT AND THEN ALONG SAID SWALE TO THE STREET. EXISTING POWER POLES RESIDE IN THE CENTER OF THE SWALE. FOR THIS REASON, A CROSS GUTTER CANNOT REPLACE THE EXISTING SWALE WITHOUT RISKING FAILURE OF THE EXISTING POWER POLES. THE DETAIL PROVIDED ABOVE OUTLINES THE IMPROVEMENTS NECESSARY TO REPLACE A CROSS GUTTER.
2. THIS DETAIL NEED ONLY BE CONSTRUCTED ALONG THE FRONT OF THE PARKING STALLS. THIS CONFIGURATION IS MEANT TO TRANSITION TO A CROSS GUTTER ONCE THE ROWS OF PARKING STALLS HAVE ENDED.



TYPICAL PARKING STALL DETAIL

STORM WATER IMPROVEMENTS
CONTRIBUTING AREAS AND REQUIRED PIPE CAPACITY CALCULATIONS

PROJECT: Paiute Tribe
Total
Existing Main BLDG 32,275
Rational Method Calculations

SURFACE TYPE	Area (SF)	AREA (Ac.)	RATIONAL COEFFICIENT (C)	A * C	ALLOWABLE RUNOFF (CFS)	INTENSITY	Q
Buildings	32275	0.74	0.9	0.667	0.148		
Pavement	0	0.00	0.9	0.000	0.000		
Concrete	0	0.00	0.9	0.000	0.000		
Landscape	0	0.00	0.2	0.000	0.000		
TOTALS		**0.74**	**0.90**	**0.667**	**0.148**	1.45	0.97

For existing condition the Rational Coefficient = 0.3, However Cedar City only allows 0.2 for developed property

STORM WATER IMPROVEMENTS
CONTRIBUTING AREAS AND REQUIRED PIPE CAPACITY CALCULATIONS

PROJECT: Paiute Tribe
Total
Grated Inlets #1 - #5 863,278
Rational Method Calculations

SURFACE TYPE	Area (SF)	AREA (Ac.)	RATIONAL COEFFICIENT (C)	A * C	ALLOWABLE RUNOFF (CFS)	INTENSITY	Q
Buildings	63726	1.46	0.9	1.317	0.293		
Pavement	206606	4.74	0.9	4.269	0.949		
Concrete	17277	0.40	0.9	0.357	0.079		
Landscape	575668	13.22	0.2	2.643	2.643		
TOTALS		**19.82**	**0.43**	**8.585**	**3.964**	1.45	12.45

For existing condition the Rational Coefficient = 0.3, However Cedar City only allows 0.2 for developed property

STORM WATER CALCULATIONS NOTES:

1. THIS STORM DRAIN LINE WAS PROPOSED BY THE CITY IN THE MASTER PLAN AND WAS INITIALLY DESIGNED TO CONVEY STORM WATER FROM CONTRIBUTING BASINS EAST OF THE PAIUTE INDIAN TRIBE OF UTAH LAND AND CONVEY SAID STORM WATER THROUGH SAID PROPERTY AT A RATE OF 54 CFS VIA A 36" STORM DRAIN LINE.

2. DUE TO THE EASE OF ACCESS THAT THE TRIBE WILL HAVE TO THE MASTER PLANNED STORM DRAIN LINE, SOME ADJUSTMENTS HAVE BEEN MADE TO CEDAR CITY'S INITIAL DESIGN TO INCORPORATE THE TRIBES USE OF THE STORM DRAIN LINE. THESE USES WILL INCLUDE:
   2.1. CAPTURE AND CONVEYANCE OF ONSITE STORM WATER PRODUCED BY EXISTING AND PROPOSED HARD SURFACES AWAY FROM THE PROPERTY.
   2.2. CONNECTING TO EXISTING AND PROPOSED STORM DRAIN LINES ON THE PROPERTY AND CONVEYING THAT STORM WATER AWAY FROM THE PROPERTY.

3. BECAUSE THE ADDITIONAL STORM WATER PRODUCED EXCEEDS THE INITIAL ANTICIPATED VOLUME THE CITY DESIGNED TO, FURTHER CALCULATIONS HAVE BEEN REQUIRED. THE FOLLOWING OUTLINES THE ADDITIONAL FLOW RATES REQUIRED BY THE MASTER PLANNED LINE.
   3.1. PIPE 6 IS NOT AFFECTED BY ANY STORM WATER PRODUCED BY THE PROJECT AREA. THIS PIPE WILL CONVEY THE CITY'S ANTICIPATED STORM WATER AS ORIGINALLY PROPOSED AT REQUIRED RATE OF 54 CFS VIA A 30" STORM DRAIN PIPE AT A MINIMUM SLOPE OF 1.75%.
   3.2. PIPE 5 IS AFFECTED BY THE ORIGINAL UPSTREAM FLOW AND STORM WATER COLLECTED ON SITE FROM THE EXISTING IMPROVEMENTS IN THE SOUTHEAST PORTION OF THE PROPERTY, TO INCLUDE THE SOUTHERN PORTION OF THE EXISTING BUILDING AND EXISTING PAVEMENT STRUCTURE. THIS STORM WATER IS TO BE CONVEYED THROUGH PIPE 5 AT A REQUIRED RATE OF 58.43 CFS AT A MINIMUM SLOPE OF 0.79%.
   3.3. PIPE 4 IS AFFECTED BY THE ORIGINAL UPSTREAM FLOW AND STORM WATER COLLECTED ON SITE FROM THE EXISTING IMPROVEMENTS EAST OF THE EXISTING BUILDING, TO INCLUDE THE EAST HALF OF SAID BUILDING AND THE PROPOSED IMPROVEMENTS WHICH ACCOMPANY THE CRYHOUSE ADDITION. THIS STORM WATER IS TO BE CONVEYED THROUGH PIPE 4 AT A REQUIRED RATE OF 63.11 CFS VIA A 36" STORM DRAIN PIPE AT A MINIMUM SLOPE OF 0.90%.
   3.4. PIPES 2 AND 3 ARE AFFECTED BY THE UPSTREAM FLOW FROM PIPE 4 AND THE STORM WATER COLLECTED ON SITE FROM THE EXISTING IMPROVEMENTS WEST OF THE EXISTING BUILDING, TO INCLUDE THE WEST HALF OF SAID BUILDING. THIS STORM WATER IS TO BE CONVEYED THROUGH PIPES 2 & 3 AT A REQUIRED RATE OF 65.05 CFS VIA 42" STORM DRAIN PIPES AT A MINIMUM SLOPE OF 0.42%.
      3.4.1. A PROPOSED 8" STORM DRAIN LINE IS MEANT TO CONNECT AT THE SAME STRUCTURE THAT CONNECTS PIPES 2 AND 3. ADDITIONAL STORM WATER INSERTED BY THIS LINE IS INCLUDED IN THE PIPE CAPACITY CALCULATIONS. THIS LINE IS MEANT TO CONVEY STORM WATER COLLECTED FROM THE EXISTING MAIN BUILDING INTO THE MASTER PLANNED STORM DRAIN LINE AT A REQUIRED RATE OF 0.98 CFS VIA AN 8" STORM DRAIN PIPE AT A MINIMUM SLOPE OF 0.65%.
   3.5. PIPE 1 IS AFFECTED BY THE UPSTREAM FLOW FROM PIPE 2 AND THE STORM WATER INSERTED INTO THE STORM DRAIN LINE FROM THE NEW FOUR POINTS MEDICAL BUILDING. IN THE FUTURE, THE TRIBE PLANS TO INCLUDE A PARKING AREA IN THE WEST REGION OF THE PROPERTY AS SHOWN. THIS WILL NOT BE INCLUDED IN THIS PROJECT BUT CALCULATIONS HAVE BEEN MADE TO ENSURE THE STORM DRAIN WILL BE ADEQUATE ONCE PARKING IS CONSTRUCTED. THIS STORM WATER IS TO BE CONVEYED THROUGH PIPE 1 AT A REQUIRED RATE OF 73.90 CFS VIA A 42" STORM DRAIN PIPE AT A MINIMUM SLOPE OF 0.54%.
      3.5.1. THE PROPOSED 18" STORM DRAIN LINE IS MEANT TO CONNECT AT THE STORM DRAIN MANHOLE THAT CONNECTS PIPES 1 AND 2. THIS LINE IS MEANT TO CONVEY STORM WATER COLLECTED FROM THE NEW FOUR POINTS MEDICAL BUILDING TO THE MASTER PLANNED STORM DRAIN LINE AT A REQUIRED RATE OF 7.45 CFS VIA AN 18" STORM DRAIN PIPE AT A MINIMUM SLOPE OF 0.50%

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CEDAR CITY, UT 84720
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REVISION: DESCRIPTION DATE: DATE: DATE: DATE: DATE:

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CEDAR CITY, IRON COUNTY, UTAH

LICENSED PROFESSIONAL ENGINEER
9054682
MICHAEL ROBERT PLATT
STATE OF UTAH

DRAWN BY: CJ WEAVER
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