CITY OF CHANDLER, ARIZONA
HAMILTON STREET IMPROVEMENTS
(IRIS PLACE TO APPLEBY ROAD)
CITY PROJECT NO. ST2007.401

MAYOR
KEVIN HARTKE

VICE MAYOR
MATT ORLANDO

COUNCIL
CHRISTINE ELLIS
ANGEL ENCINAS
OD HARRIS
JANE POSTON
MARK STEWART

UTILITY COMPANY	UTILITY CONTACT	DATE SUBMITTED
CITY OF CHANDLER	CITY OF CHANDLER	NOVEMBER 2022
CENTURYLINK	LANCE HOLJE	NOVEMBER 2022
TERRA TECH (CENTURYLINK)	KEVIN WAGNER	NOVEMBER 2022
COX	RYAN KANN	JULY 2022
SRP LAND AGENT	WENDY LESUEUR	NOVEMBER 2022
SRP IRRIGATION	GARY BRUNO	NOVEMBER 2022
SRP POWER	VINCENT SILVESTRO	NOVEMBER 2022

BENCHMARK:

SECTION 23, TOWNSHIP 2S, RANGE 5E
CITY OF CHANDLER CMCN #47B: COC BRASS CAP IN CONCRETE, FLUSH, AT THE INTERSECTION OF LANTANA RANCH BLVD AND YELLOWSTONE PLACE, 1320' EAST OF MCQUEEN ROAD AND 280' SOUTH OF OCOTILLO ROAD
NAVD 1988 ELEVATION = 1232.50
NGVD 1929 ELEVATION = 1230.84

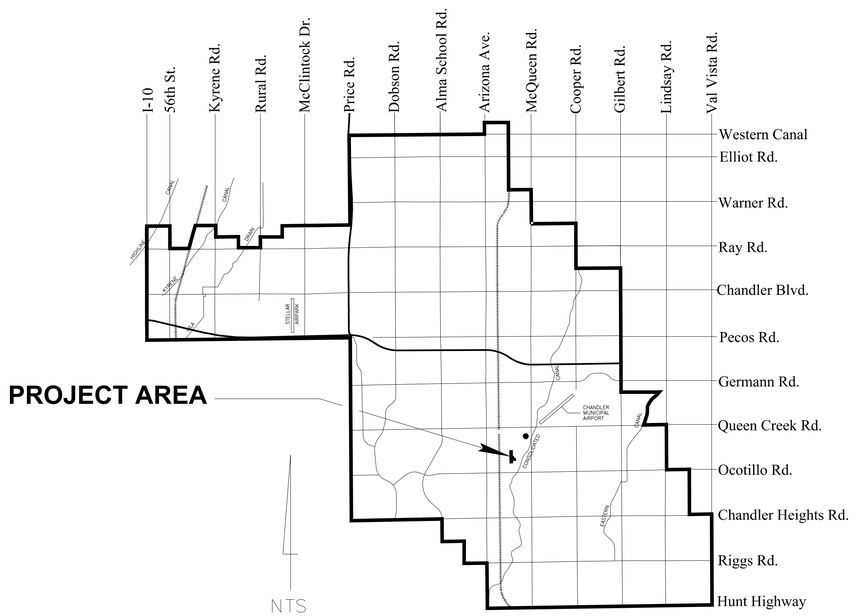
TEMPORARY BENCHMARK:
BRASS CAP FLUSH AT THE INTERSECTION OF CENTRE POINTE PARKWAY AND OCOTILLO ROAD
NAVD 1988 ELEVATION = 1225.86

BASIS OF BEARING:
SOUTH LINE, SE¼, SECTION 15, T2S, R5E, N89°05'05"E

HORIZONTAL DATUM AND ADJUSTMENT:
NAD83(HARN), ARIZONA STATE PLAN COORDINATE SYSTEM, CENTRAL ZONE,
COMBINED SCALE FACTOR(CSF) = 1.0001530412
VERTICAL DATUM OFFSET VALUE: 1.66'
NGVD 29 TO NAVD 88

STATUS: (FINAL)

REV. NO.	DATE	DRWN	CHKD	REMARKS



VICINITY MAP

APPROVED:

PUBLIC WORKS & UTILITIES DIRECTOR — DATE
RMoon 10/19/2023, 11:59:39 AM CIV21-0015 Kimberly Moon

CITY ENGINEER — DATE
RMoon 10/19/2023, 11:59:50 AM CIV21-0015 Kimberly Moon

CITY TRANSPORTATION ENGINEER — DATE

CIVIL PLAN REVIEW MANAGER — DATE
Jason Richardson 10/24/2023, 2:40:25 PM CIV21-0015 Jason Richardson

MCESD PERMIT NUMBERS:
DWR-23-00140
RWR-23-00002

MARICOPA COUNTY ENVIRONMENTAL SERVICE DEPARTMENT (AS REQUIRED) — DATE 03-16-2023

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY (AS REQUIRED) — DATE

AS-BUILT CERTIFICATION:

I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION AS SHOWN HEREON WAS MADE UNDER MY SUPERVISION, OR AS NOTED, AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR SIGNATURE — PRINTED NAME — DATE
FIRM NAME:

REGISTRATION NO. — EXPIRATION DATE

I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION SHOWN HEREON SATISFIES THE INTENT OF THE DESIGN.

REGISTERED CIVIL ENGINEER SIGNATURE — PRINTED NAME — DATE
FIRM NAME:

REGISTRATION NO. — EXPIRATION DATE

CITY OF CHANDLER
PUBLIC WORKS DEPT.
215 EAST BUFFALO STREET
CHANDLER, AZ 85225
PHONE NO. (480) 782 - 3331

"IN ACCORDANCE WITH AAC R18-4-213, ALL MATERIALS INSTALLED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61." ALL POTABLE WATERLINES AND FITTINGS SHALL HAVE A NSF-PW SEAL. ALL MATERIALS SHALL BE LEAD FREE AS DEFINED IN AAC R18-5-504 AND R18-4-101.

REGISTERED PROFESSIONAL ENGINEER 50900 KEVIN R. THOMAS Date Signed 09/30/23 ARIZONA U.S.A. Expires 06/30/25

NFra Inc.
a transportation engineering firm
77 EAST THOMAS ROAD, SUITE 200
PHOENIX, AZ 85012
PHONE NO. (602) 277-0967

C.O.C. LOG NO. CIV21-0015

HAMILTON STREET IMPROVEMENTS PROJECT NO. ST2007.401

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED MAG SPECIFICATIONS AND STANDARD DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
3. THE DEVELOPMENT ENGINEERING OFFICE SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION (480-782-3300).
4. PROJECT ELEVATIONS ARE BASED UPON NAVD 88 DATUM. THE FOLLOWING BENCHMARK WAS UTILIZED:

BENCHMARK NUMBER	NGVD 29 ELEVATION	DESCRIPTION	EQUATION	NGVD 88 ELEVATION
47B	1230.84	SECTION 23, T2S, R5E, CITY OF CHANDLER BRASS CAP IN CONC, FLUSH, AT THE INTERSECTION OF LANTANA RANCH BLVD AND YELLOWSTONE PLACE, 1320' EAST OF MCQUEEN ROAD AND 280' SOUTH OF OCOTILLO ROAD	1.66'	1232.50

5. PRIOR TO ANY CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE LANDSCAPE MAINTENANCE AND DESIGN COORDINATOR AT 480-782-3428. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITIONS USING THE FOLLOWING REQUIREMENTS:

A. ALL LANDSCAPE IMPACTED BY CONSTRUCTION SHALL BE REPLACED IN KIND AND SIZE, OR AS DETERMINED BY THE CITY;
B. ALL IRRIGATION SYSTEMS SHALL BE RESTORED TO FULLY FUNCTIONING STATUS. ANY IRRIGATION LOCATED BENEATH ASPHALT OR CONCRETE SHALL BE SLEEVED WITH SCHEDULE 40 PVC TWO NOMINAL SIZES LARGER;
C. THE AREA OF CONSTRUCTION SHALL BE TREATED WITH PRE-EMERGENT HERBICIDE (I.E. SURFLAN);
D. GRANITE OF A SIZE AND COLOR TO MATCH EXISTING SHALL BE SPREAD A MINIMUM OF TWO INCHES THICK;
E. THE STREETS DIVISION SHALL BE CONTACTED TO INSPECT ALL WORK BEFORE A CONDITIONAL ACCEPTANCE IS ISSUED;
F. THE CONTRACTOR/DEVELOPER SHALL MAINTAIN THE AREA FOR NINETY DAYS AFTER CONDITIONAL ACCEPTANCE. AFTER 90 DAYS THE CITY SHALL BE CONTACTED FOR FINAL ACCEPTANCE AND ASSUMPTION OF MAINTENANCE.

6. WORK PERFORMED BY THE CONTRACTOR:

A. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
B. WHENEVER THE INSPECTOR FINDS ANY WORK BEING PERFORMED IN A DANGEROUS OR UNSAFE MANNER, OR CONTRARY TO THE PLANS OR SPECIFICATIONS, OR NOT MEETING THE INTENT OF THE PLANS OR SPECIFICATIONS, THE INSPECTOR WILL ISSUE A STOP WORK ORDER. UPON ISSUANCE OF A STOP WORK ORDER, THE CITED WORK SHALL IMMEDIATELY CEASE. THE STOP WORK ORDER SHALL STATE THE REASON FOR THE ORDER, AND THE CONDITIONS WHICH CITED WORK IS AUTHORIZED TO RESUME UPON WRITTEN ORDER TO RESUME WORK. WHERE AN EMERGENCY EXISTS, THE INSPECTOR SHALL NOT BE REQUIRED TO GIVE A WRITTEN NOTICE PRIOR TO STOPPING THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND DELAYS FOR THE WORK RELATED TO THE STOP WORK ORDER.

7. THE CONTRACTOR SHALL UNCOVER ALL EXISTING CITY UTILITY LINES BEING TIED INTO TO VERIFY THEIR TYPE, CONDITION, LOCATION, INVERT, SLOPE, AND ANY OTHER INFORMATION NEEDED TO DETERMINE THAT THE UTILITY CONNECTION WILL FUNCTION AS DESIGNED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ANY REPAIRS NECESSARY TO THE LATERAL OR MAIN LINES OF THE CITY WATER, RECLAIMED WATER, SANITARY SEWER, AND/OR STORM DRAIN SYSTEM NECESSARY FOR THE CONNECTION TO FUNCTION AS DESIGNED. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PRIVATE UTILITIES (ELECTRIC, TELEPHONE, PIPELINES, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION. BLUE STAKE TELEPHONE (602) 263-1100.
8. THE CITY OF CHANDLER IS NOT RESPONSIBLE FOR LIABILITY INCURRED DUE TO DELAYS AND/OR DAMAGES TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.
9. NO FINAL ACCEPTANCE SHALL BE ISSUED UNTIL 4 MIL PHOTO MYLAR REPRODUCIBLE "AS-BUILT" PLANS CERTIFIED AND SEALED BY A REGISTERED CIVIL ENGINEER, HAVE BEEN SUBMITTED AND ACCEPTED BY THE CITY ENGINEER.
10. APPLICATIONS FOR STREET CUT PERMITS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO APPROVAL OF IMPROVEMENT PLANS. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336 AND AS MODIFIED BY CITY SUPPLEMENTS.
11. BACKFILLING SHALL NOT BE STARTED UNTIL LINES ARE APPROVED BY THE CITY ENGINEER. ALL BACKFILL SHALL BE HALF-SACK CLSM UNLESS OTHERWISE APPROVED ON THE PLANS. ABC OR NATIVE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH MAG SECTION 601, TYPE I. BACKFILL PLACEMENT AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD DTL 200 T-TOP.
12. CONSTRUCTION OF CONCRETE OR PAVING ITEMS SHALL NOT COMMENCE UNTIL ALL UNDERGROUND WORK HAS BEEN INSPECTED AND TESTED.
13. DISPOSAL OF AND STOCKPILING OF EXCESS MATERIAL WITHIN THE CHANDLER CITY LIMITS OR PLANNING AREA SHALL BE DONE IN SUCH A WAY THAT WILL NOT CREATE A NUISANCE. THE PLACING OF MATERIAL ON PRIVATE PROPERTY OF ANOTHER REQUIRES WRITTEN AUTHORIZATION. EARTHWORK STOCKPILES ARE NOT TO EXCEED 6 FEET IN HEIGHT. SLOPES ON ALL SIDES OF THE STOCKPILE SHALL NOT EXCEED A 1 TO 2 RATIO OF HEIGHT TO LENGTH. ANY EARTHWORK STOCKPILE, EVEN LESS THAN 6 FEET, MUST BE REMOVED WITHIN 7 DAYS OF CITY NOTIFICATION IF DUST SUPPRESSION EFFORTS FAIL TO MAINTAIN SATISFACTORY AIRBORNE CONTAMINANT CONTROL.
14. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL AND APPROVED TRAFFIC SEQUENCING PLANS AND/OR NOTES.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES THE CONTRACTOR SHALL UTILIZE A PM10-CERTIFIED STREET SWEEPER FOR STREET CLEANING.
16. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
17. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN SEWER SERVICES AND WATER OR FIRELINE SERVICES. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN RECLAIMED WATER SERVICES AND SEWER, WATER, OR FIRELINE SERVICES.
18. SETBACKS FOR UTILITY POLES, STRUCTURES, AND OTHER SIMILAR FACILITIES (NOT INCLUDING LANDSCAPING) GREATER THAN 18 INCHES IN HEIGHT SHALL BE 5.5 FEET FROM THE BACK OF CURB UNLESS APPROVED IN WRITING BY THE CITY ENGINEER. IN CASES WHERE THE FACILITIES ARE ADJACENT TO A DECELERATION LANE, BUS BAY, OR MEDIAN CURB, THE SETBACK CAN BE REDUCED TO 2.5 FEET FROM THE BACK OF CURB.
19. SCREEN WALLS OVER 7', RETAINING WALLS OVER 4' MUST HAVE A BUILDING PERMIT AND BE IN CONFORMANCE WITH CHANDLER BUILDING CODE.
20. ALL UNDERGROUND FACILITIES INSTALLED IN ANY REAL PROPERTY OUTSIDE THE CITY'S RIGHT-OF-WAY SHALL COMPLY WITH THE FOLLOWING MARKING STANDARDS IN ACCORDANCE WITH HOUSE BILL 2256. A YELLOW INSULATED COPPER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND UTILITIES FOR FIRE LINE PIPING, POTABLE WATER DISTRIBUTION PIPING, SANITARY SEWER LINES, STORMWATER PIPING, RECLAIMED WATER PIPING, GRAVITY FLOW IRRIGATION PIPING AND PRESSURIZED IRRIGATION PIPING LARGER THAN TWO (2) INCHES IN DIAMETER UNLESS THESE FACILITIES CAN BE DETECTED FROM ABOVE GROUND WITH AN ELECTRONIC LOCATING DEVICE. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE PIPING. THE TRACER WIRE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.
21. ANY CONSTRUCTION DETOURS WILL REQUIRE AN ALL-WEATHER SURFACE PER MARICOPA COUNTY AIR QUALITY REQUIREMENTS.
22. THE CONTRACTOR SHALL SUPPLY CITY INSPECTOR CONSTRUCTION MATERIAL TESTING DOCUMENTATION THROUGHOUT THE PROJECT.
23. ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETE PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE.
24. THE FOLLOWING UTILITY COMPANIES HAVE BEEN IDENTIFIED BY BLUE STAKE COORDINATION AND PROJECT PLANS HAVE BEEN SUBMITTED MOST RECENTLY AS NOTED:

UTILITIES WITHIN OR AFFECTED BY THE PROJECT	
UTILITY CONTACT	DATE SUBMITTED
CITY OF CHANDLER	NOVEMBER 2022
CENTURYLINK	NOVEMBER 2022
TERRA TECH (CENTURYLINK)	NOVEMBER 2022
COX COMMUNICATIONS	JULY 2022
SALT RIVER PROJECT (POWER)	NOVEMBER 2022
SALT RIVER PROJECT (SRVWUA)	NOVEMBER 2022

GRADING AND DRAINAGE NOTES

1. A GRADING PERMIT IS REQUIRED.
2. APPROVED MINIMUM FINISH FLOOR ELEVATION SHALL NOT BE ALTERED.
3. STAKING FINISH FLOOR ELEVATION IS THE RESPONSIBILITY OF THE DEVELOPER AND HIS ENGINEER.
4. CONTRACTOR SHALL PROVIDE GRADING FOR POSITIVE DRAINAGE IN ALL RETENTION BASINS AT ELEVATIONS AS SHOWN ON THE PLANS. BOTTOM OF BASIN SHALL BE GRADED TO DRAIN TOWARD DRYWELLS (WHEN USED). MAXIMUM SIDESLOPES SHALL BE 4:1.
5. DRYWELL INLET GRATE SHALL BE FLUSH WITH ROAD SURFACE OR TURF, OR 1-1/2" ABOVE THE FINISHED GRADE OF DECOMPOSED GRANITE LANDSCAPED AREAS.
6. DRILLING LOGS FOR DRYWELLS WILL BE FURNISHED TO THE CITY INSPECTOR PRIOR TO FINAL ACCEPTANCE.
7. A PERCOLATION TEST SHALL BE REQUIRED OF COMPLETED DRYWELLS PRIOR TO ACCEPTANCE. SHOULD EXISTING SOIL CONDITIONS BE ENCOUNTERED WHICH LACK SUFFICIENT PERCOLATION RATES, ADDITIONAL DRYWELLS OR AN ALTERNATE METHOD OF STORM WATER RUN-OFF DISPOSAL WILL BE REQUIRED.

DRYWELL REGISTRATION #	FIELD PERC RATE (CFS)
AZ-20230323-JK-3010	

8. DRYWELL CONSTRUCTION SHALL BE DONE ONLY BY CONTRACTORS LICENSED BY THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY. APPLICATION FOR DRYWELL REGISTRATION WAS SUBMITTED TO ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ON 03/23/2023.
9. THE APPROVED DRYWELL REGISTRATION SHALL BE SUBMITTED TO THE CITY BY THE DEVELOPER OR HIS ENGINEER AT THE TIME AS-BUILTS ARE SUBMITTED.
10. ALL WEEP HOLES IN WALLS SHALL BE PROVIDED WITH EROSION PROTECTION 12" THICK WITH D50 =4" RIPRAP, 24" IN WIDTH, EXTENDED TO THE BACK OF SIDEWALK OR TO THE BOTTOM OF RETENTION BASIN, WHICHEVER APPLIES.
11. A RETAINING WALL WILL BE REQUIRED IF AT THE COMPLETION OF GRADING THERE EXISTS MORE THAN ONE FOOT OF DIFFERENCE IN ELEVATION BETWEEN THIS SITE AND ADJACENT PROPERTIES.
12. SCREEN WALLS OVER 7', RETAINING WALLS OVER 4' MUST HAVE A BUILDING PERMIT AND BE IN CONFORMANCE WITH CHANDLER BUILDING CODE.
13. THE EXISTING RETENTION AND DRAINAGE FACILITIES ON THIS SITE WILL NOT BE REMOVED FROM SERVICE UNTIL THE PERMANENT RETENTION AND DRAINAGE FACILITIES ARE FUNCTIONAL.

PAVING NOTES

1. THE LOCATION OF ALL VALVES MUST BE REFERENCED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION.
2. NO PAVING CONSTRUCTION SHALL BE PERFORMED UNTIL ALL UNDERGROUND UTILITIES WITHIN THE RIGHT-OF-WAY HAVE BEEN COMPLETED.
3. THE BASE COURSE WILL NOT BE PLACED ON SUBGRADE UNTIL BASE REQUIREMENTS HAVE BEEN COMPLETED AND ACCEPTED BY THE CITY ENGINEER.
4. GUTTERS WILL BE WATER TESTED IN THE PRESENCE OF THE CITY ENGINEER TO INSURE PROPER DRAINAGE PRIOR TO FINAL APPROVAL.
5. THE EXACT POINT OF PAVEMENT MATCHING FOR TERMINATION AND OVERLAY MAY BE DETERMINED IN THE FIELD BY THE CITY ENGINEER.
6. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS.
7. STREET NAME SIGNS WILL BE INSTALLED BY THE CITY ON DEVELOPER INSTALLED POLES AT THE DEVELOPER'S EXPENSE. POLES SHALL BE PER C-613. PAYMENT WILL BE COLLECTED AT THE TIME A PAVING PERMIT IS ISSUED.
8. ALL TRAFFIC CONTROL SIGNS SHALL BE CONSTRUCTED OF HIGH INTENSITY GRADE SHEETING, UNLESS OTHERWISE NOTED.
9. ALL STREET SECTIONS, EXCEPT ARTERIALS, SHALL HAVE INSTALLED A PRESERVATIVE SEAL COAT PER MAG SECTION 334 AND SHALL BE AN ASPHALT EMULSION SEALER PER MAG SECTION 718.3. THE SEAL SHALL BE INSTALLED AT THE END OF THE WARRANTY PERIOD, OR AT THE CITY'S OPTION, A FEE MAY BE COLLECTED IN LIEU OF THE APPLICATION.
10. ALL CURB-OPENING CATCH BASIN ACCESS COVERS SHALL BE PER MAG STD DTL 536, ALTERNATE COVER. A STORM DRAIN INLET MARKER IN ACCORDANCE WITH C-508 SHALL BE INSTALLED ON THE TOP OF THE CURB AND ALIGNED WITH THE CENTER OF THE INLET.
11. PAVEMENT MATCHING AND SURFACING REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD DTL 200, MAG SECTION 336, AND SECTION 337. ALL CRACKS AND JOINTS SHALL BE SEALED, UNLESS OTHERWISE DIRECTED BY CITY ENGINEER OR STREET SUPERINTENDENT.

SIGNING AND STRIPING NOTES

1. THE CITY TRANSPORTATION ENGINEER'S OFFICE SHALL BE NOTIFIED 5 BUSINESS DAYS PRIOR TO STARTING ANY SIGNING OR STRIPING WORK AT (480) 782-3454.
2. ALL PAVEMENT MARKINGS, SIGN MATERIALS AND CONSTRUCTION SHALL CONFORM TO ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. SIGN LOCATIONS AND OFFSETS MAY BE ADJUSTED BY THE CITY TRANSPORTATION ENGINEER TO IMPROVE VISIBILITY.
4. ALL MEDIAN NOSES SHALL BE PAINTED YELLOW WITH REFLECTIVE GLASS BEADS PER C-617.
5. ALL RAISED PAVEMENT REFLECTORS SHALL BE INSTALLED WITH CRAFCO PAVEMENT REFLECTOR ADHESIVE, OR EQUAL.
6. ALL TRAFFIC CONTROL SIGNS, EXCEPT STOP SIGNS, SHALL BE ATTACHED TO STREET LIGHT POLES IF THE POLE IS WITHIN 25 FT. OF SIGN LOCATION AS SHOWN ON THE SIGNING AND STRIPING PLANS.
7. ALL CROSSWALKS, STOP BARS, MINI-SKIPS, TURN ARROWS AND LEFT/RIGHT TURN LANE STRIPING SHALL BE THERMOPLASTIC.
8. ALL TRAFFIC CONTROL SIGNS SHALL BE CONSTRUCTED OF HIGH INTENSITY GRADE SHEETING SCREENED WITH 3-M APPROVED INKS OR EQUIVALENT APPROVED BY THE TRANSPORTATION DIVISION. WARRANTY DOCUMENTS ARE REQUIRED AND SHALL BE SUBMITTED PRIOR TO FINAL JOB ACCEPTANCE.
9. ALL EXISTING SIGNS TEMPORARILY REMOVED BY THE CONTRACTOR SHALL BE SALVAGED FOR REINSTALLATION BY THE CONTRACTOR. ALL EXISTING SIGNS PERMANENTLY REMOVED BY THE CONTRACTOR SHALL BE SALVAGED FOR RETURN TO THE CITY SIGN SHOP.
10. ALL CONFLICTING PAVEMENT MARKINGS WILL BE OBLITERATED BY WATER BLASTING BY THE CONTRACTOR. GRINDING IS NOT PERMITTED.
11. A SEALANT APPROVED BY THE CITY OF CHANDLER STREETS DIVISION SHALL BE APPLIED BY THE CONTRACTOR TO ALL AREAS OF PAVEMENT MARKING OBLITERATION. REFER TO THE LIST OF APPROVED PRODUCTS.
12. THE CITY TRANSPORTATION ENGINEER MAY REQUIRE THE CONTRACTOR TO ADJUST SIGNING AND STRIPING AS NECESSARY.
13. ALL CONFLICTING SIGNAGE SHALL BE REMOVED BY THE CONTRACTOR.
14. ALL CITY SIGNS MUST BE RETURNED TO THE CITY SIGN SHOP.

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/3/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
GENERAL NOTES

CITY PROJECT NO.
ST2007.401

DWG. NO.
GN01

2 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

WATER NOTES

1. ALL EXTENSIONS TO EXISTING WATER LINES OVER ELEVEN (11) MONTHS IN AGE SHALL HAVE A NEW VALVE OF LIKE SIZE INSTALLED AT THE POINT OF EXTENSION. A ¾" SADDLE AND RISER SHALL BE INSTALLED ON THE LINE BETWEEN THE NEW VALVE AND THE FIRST EXISTING VALVE. THIS LINE WILL BE FLUSHED AND TESTED BY THE CITY AND THE ¾" NUT AND RISER REMOVED.
2. WATERLINES SHALL BE INSTALLED PER C-308 AND THE CITY SUPPLEMENT TO SECTION 610. TESTING SHALL BE IN ACCORDANCE WITH SECTION 611. DEVELOPER IS RESPONSIBLE FOR TESTING PRIVATE WATERLINES 4" AND LARGER.
3. FIRE HYDRANTS SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN ACCORDANCE WITH C-303 AND C-305.
4. ALL WATER SERVICE LINE AND METER BOX INSTALLATIONS SHALL CONFORM TO C-301. METER BOXES AND LIDS SHALL BE SUPPLIED BY THE DEVELOPER AND INSTALLED FACING THE LOT.
5. CITY OF CHANDLER WILL FURNISH AND INSTALL ALL WATER METERS WITH PREVAILING COSTS TO BE PAID BY DEVELOPER. THE CITY OF CHANDLER WATER DIVISION SHALL BE NOTIFIED AT (480) 782- 3700 24 HOURS PRIOR TO INSTALLATION. THE DEVELOPER SHALL PROVIDE ANY NECESSARY WATER METER ADAPTERS FOR CONNECTION TO THE SERVICE LINES.
6. ALL VALVES 6" – 24" SHALL BE GATE TYPE IN CONFORMANCE WITH MAG SECTION 630.3, UNLESS OTHERWISE NOTED.
7. ALL VALVE BOXES SHALL CONFORM TO C-307.
8. CITY WATER VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY. CITY REQUIRES A 48 HOUR NOTICE FOR SYSTEM SHUTDOWNS. CONTRACTOR IS REQUIRED TO NOTIFY AFFECTED CUSTOMERS 24 HOURS PRIOR. BUSINESS' MAY REQUIRE AFTER HOURS SHUTDOWNS. RESIDENTIAL FLOWS AFTER SHUTDOWN MAY REQUIRE A PUMP. CONTRACTOR IS RESPONSIBLE TO INSTALL 2" TAPS TO RELIEVE PRESSURE AND ALLEVIATE RESIDUAL FLOWS WHEN NEEDED.
9. ALL TAPS SHALL USE A BRONZE SERVICE SADDLE. EIGHT (8) INCHES OR LESS SHALL BE SINGLE STRAP AND TEN (10) INCHES OR GREATER SHALL BE DOUBLE STRAP.
10. TAPS IN ACP SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE ACP MANUFACTURERS ASSOCIATION.
11. ALL FIRELINE PIPING, POTABLE WATER DISTRIBUTING PIPING LARGER THAN TWO (2) INCHES IN DIAMETER SHALL HAVE TRACER WIRES INSTALLED PER C-408.
12. ALL PIPE IN THE GROUND SHALL HAVE AWG THWN #14 INSULATED COPPER TRACING WIRE ATTACHED TO THE PIPE AND INTERCONNECTED TO VALVES AT VALVE BOX SPACING INTERVALS. WARNING TAPE IS TO BE USED BURIED A MINIMUM 12" ABOVE THE PIPE. SEE C-408.
13. POLYETHYLENE ENCASEMENT SHALL CONFORM WITH THE APPLICABLE REQUIREMENTS OF AWWA C-600 & AWWA C-105.
14. MECHANICAL OR RESTRAINED JOINT DUCTILE IRON PIPE SHALL BE USED FOR WATER LINE PROTECTION WHEN MAG STD DTL 404 IS SPECIFIED ON THE PLANS.
15. VALVE BOX AND COVER GRADE LOCATED OUTSIDE OF A PAVED AREA SHALL BE SET ONE HALF INCH ABOVE SIDEWALK OR ADJACENT GRADE PER C-317.
16. NO VALVE BOX SHALL BE LOCATED WITHIN SIDEWALK OR SIDEWALK RAMP.
17. ALL 1" SERVICES SHALL BE INSTALLED WITH APPROVED ANGLE BALL METER VALVE, OF A SIZE DEPENDENT ON WATER METER SIZE. SEE C-301.
18. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH "OUT OF SERVICE" SIGNS AT TIME OF INSTALLATION. THE SIGNS SHALL COMPLY WITH C-303 AND SHALL REMAIN ON THE FIRE HYDRANTS UNTIL THE WATER LINES ARE TESTED, APPROVED AND PRESSURIZED. THE SIGNS SHALL BE REINSTALLED AT ANY TIME ANY FIRE HYDRANTS ARE TAKEN OUT OF SERVICE, REGARDLESS OF REASON OR THE AMOUNT OF TIME THE FIRE HYDRANTS ARE EXPECTED TO BE OUT OF SERVICE, AND DISPATCH SHALL BE NOTIFIED AT (480) 782-4130. ONLY CITY PERSONNEL SHALL REMOVE A SIGN.

ENGINEER'S WATER NOTES

1. ALL PIPES, FITTINGS, VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES SHALL CONFORM TO CURRENT AWWA, ASTM AND NSF STANDARDS (EB 10, CHAPTER 7, SECTION B).
2. ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61 (PER R18-4-213.B).

RECLAIMED WATER NOTES

1. RECLAIMED WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH MAG SECTION 616, CITY SUPPLEMENTS, AND THESE NOTES.
2. THE MINIMUM DEPTH OF COVER WITHIN THE RIGHT-OF-WAY OF ARTERIAL STREETS SHALL BE 7', AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. PIPE SEPARATION ALSO SHALL CONFORM TO ARIZONA RULE R18-9-602, PIPELINE CONVEYANCES OF RECLAIMED WATER.
4. A REDUCED PRESSURE BACKFLOW DEVICE SHALL BE INSTALLED, AS PART OF THE ORIGINAL SYSTEM, ON A RECLAIMED WATER SYSTEM THAT WILL USE POTABLE WATER AS AN INITIAL SOURCE AND WILL USE RECLAIMED WATER AS A SOURCE LATER. ON SUCH A SYSTEM, CONCURRENT CONNECTIONS SHALL NOT BE MADE AT ANY TIME TO BOTH POTABLE WATER AND RECLAIMED WATER SYSTEMS, REGARDLESS WHETHER ONE OR BOTH SYSTEMS ARE DEVOID OF SUPPLY.
5. PRIVATE RECLAIMED WATER LINES SHALL BE INSTALLED IN SLEEVES WHERE THEY CROSS PUBLIC OR PRIVATE RIGHT-OF-WAY. PIPE SLEEVES SHALL BE PIPE MEETING THE REQUIREMENTS FOR CONVEYANCE PIPE AND SHALL BE TWO NOMINAL SIZES LARGER WITH LOCATOR WIRE AND I.D. TAPE PER C-408. ENCROACHMENT PERMIT REQUIRED.
6. RECLAIMED WATER IRRIGATION SYSTEM SPRINKLER HEADS, VALVE BOXES AND COVERS, AND FLOW CONTROL HANDLES ON VALVES SHALL BE PURPLE.
7. THE WORDS 'RECLAIMED WATER' SHALL BE STENCILED ON BACKFLOW ASSEMBLIES USING THE COLOR PURPLE OR SHALL BE OTHERWISE BE LEGIBLY MARKED.
8. PVC PIPE SHALL NOT BE EXPOSED TO DIRECT ULTRAVIOLET RADIATION (SUNLIGHT) FOR MORE THAN 30 DAYS, WHETHER THE TIME IS CONTINUOUS OR CUMULATIVE. PVC PIPE SHALL BE PROTECTED FROM DIRECT ULTRAVIOLET RADIATION FOR ANY TIME OF EXPOSURE EXCEEDING 30 DAYS. PVC PIPE THAT HAS BEEN DISCOLORED BY EXPOSURE TO ULTRAVIOLET RADIATION IS UNACCEPTABLE.
9. VALVES 4" THROUGH 24" SHALL BE GATE VALVES UNLESS NOTED OTHERWISE. EACH VALVE SHALL BE FURNISHED WITH A BAR WELDED TO THE OPERATING NUT IN ACCORDANCE WITH C-406, THEREBY REQUIRING A TOOL WITH A KEY SLOT TO EXERCISE THE VALVE. VALVE BOXES AND COVERS SHALL CONFORM TO C-406.
10. NO VALVE, RISER, BOX OR COVER SHALL BE LOCATED BENEATH OR WITHIN A SIDEWALK OR SIDEWALK RAMP.
11. CITY RECLAIMED WATER VALVES SHALL BE OPERATED BY CITY OF CHANDLER PERSONNEL ONLY.
12. CITY OF CHANDLER WILL FURNISH AND INSTALL WATER METERS WITH PREVAILING COSTS PAID BY THE DEVELOPER.
13. METER BOXES AND COVERS SHALL BE SUPPLIED BY THE DEVELOPER AND SHALL BE INSTALLED BY THE CONTRACTOR FACING AWAY FROM THE STREET. METER BOXES FOR METERS 2" AND SMALLER SHALL BE CONCRETE OR POLYMER CONCRETE AND SHALL CONFORM TO MAG STD DTL 320. THE INSIDE OF EACH METER BOX SHALL BE PAINTED PURPLE. METER BOX COVERS SHALL BE POLYMER CONCRETE AND SHALL CONFORM TO C- 301. METER BOX COVERS SHALL BE CAST WITH THE WORDS "RECLAIMED WATER" IN THE OUTSIDE SURFACE OR HAVE TAGS WITH THE WORDS "RECLAIMED WATER" FIRMLY ATTACHED TO THE OUTSIDE SURFACE. LETTERING SIZE AND FORMAT SHALL BE SIMILAR TO THE LETTERING IN MAG STD DTL 315. TAGS SHALL OTHERWISE MEET THE REQUIREMENTS FOR RECLAIMED WATER VALVE TAGS.
14. METER VAULTS SHALL BE IN CONFORMANCE TO C-416. THE INSIDE OF EACH METER VAULT AND METER BOX SHALL BE PAINTED PURPLE. METER VAULT AND METER BOX COVERS SHALL INCLUDE THE WORDS "RECLAIMED WATER" AS REQUIRED FOR METER BOX COVERS ABOVE FOR METERS 2" AND SMALLER. THE CITY OF CHANDLER WATER DISTRIBUTION DIVISION SHALL BE NOTIFIED 24 HOURS BEFORE INSTALLATION AT (480) 782-3700.
15. WARNING SIGNS: AREAS IRRIGATED WITH RECLAIMED WATER SHALL BE IDENTIFIED BY SURFACE MOUNTED SIGNS, AT LEAST 12" WIDE BY 9" HIGH, OF C-405 PAGE 11 OF 12. SIGNS SHALL BE PROMINENTLY LOCATED AT ALL SUBDIVISION AND PARK ENTRANCES, IN ALL AREAS SUBJECT TO IRRIGATION, AND AT ALL LAKES AND WATER FEATURES. SIGNS SHALL BE POSTED AT EACH PEDESTRIAN ENTRANCE AND ACCESS POINT TO AN AREA WHERE RECLAIMED WATER IS USED. SIGNS SHALL BE SPACED AT A MAXIMUM INTERVAL OF 100 YARDS, EXCEPT FOR ROADWAY MEDIANS, WHERE SIGNS MAY BE SPACED AT A MAXIMUM INTERVAL OF 300 YARDS.
16. RECLAIMED WATER LINES GREATER THAN OR EQUAL TO 4" IN DIAMETER SHALL BE TESTED IN ACCORDANCE WITH THE SAME REQUIREMENTS AS POTABLE WATER LINES. RECLAIMED WATER LINES LESS THAN 4" IN DIAMETER ARE NOT REQUIRED TO BE TESTED. ON A RECLAIMED WATER SYSTEM THAT WILL NOT USE POTABLE WATER AS AN INITIAL SOURCE, RECLAIMED WATER MAY BE USED IN LIEU OF POTABLE WATER TO FILL RECLAIMED WATER PIPE BEING TESTED. DISINFECTION OF THE RECLAIMED WATER MAIN SHALL NOT BE REQUIRED.
17. RECLAIMED WATER LINES LARGER THAN TWO (2) INCHES IN DIAMETER SHALL HAVE LOCATOR WIRE INSTALLED PER C-408.

UTILITY COMPANY NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT M.A.G. STANDARD SPECIFICATIONS AND DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED OF WORK THROUGH THE ON-LINE INSPECTION REQUEST PROCESS AT HTTPS://CHANDLERAZ.GOV/CLICS/ OR BY CALLING THE AUTOMATED PHONE SYSTEM AT (480) 782-3100. PLEASE SEE THE INSPECTION CARD ISSUED WITH THE PERMIT FOR MORE INFORMATION ON HOW TO SCHEDULE AN INSPECTION. A CONTACT NAME AND PHONE NUMBER MUST BE INCLUDED IN THE SCHEDULING COMMENTS. EMERGENCY WORK PERFORMED AFTER NORMAL WORK HOURS SHALL BE REPORTED TO THE POLICE DISPATCHER AT (480) 782-4132.
3. ALL STREET CROSSINGS SHALL BE BORED USING HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) IN ACCORDANCE WITH M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS UNLESS APPROVAL TO OPEN CUT HAS BEEN RECEIVED FROM THE CITY ENGINEER AND SUCH APPROVAL HAS BEEN NOTED ON THE PERMIT. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD DETAIL 200, "T" TOP, WITH FULL DEPTH ABC BACKFILL.
4. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL. TRAFFIC RESTRICTIONS ARE NOT PERMITTED ON ARTERIALS AND MAJOR COLLECTORS PRIOR TO 8:30 A.M. OR AFTER 4 P.M.
5. RESTRICTIONS IN ALLEYS WILL BE COORDINATED IN ADVANCE WITH THE SOLID WASTE SERVICES DIVISION (480) 782-3510.
6. PERMITS ARE REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY. A COPY OF THE PERMIT AND APPROVED PLAN SHALL BE AVAILABLE AT THE JOB SITE. FAILURE TO SECURE PERMITS PRIOR TO STARTING CONSTRUCTION WILL RESULT IN THE ASSESSMENT OF PENALTY FEES.
7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE COMPACTION TESTED AND RESULTS KEPT ON FILE FOR A MINIMUM OF ONE YEAR.
8. ANY DAMAGE TO IRRIGATION SYSTEMS WITHIN THE CITY RIGHT-OF-WAY SHALL BE REPAIRED, WITHIN 48 HOURS OF SAID DAMAGE, TO PREVENT LOSS OF LANDSCAPE MATERIAL.
9. WHEN TRENCHING IN ALLEYS, ALL TRENCH SPOILS SHALL BE REMOVED FROM THE AREA AND ALL TRENCH BACKFILL SHALL BE AGGREGATE BASE IN CONFORMANCE WITH M.A.G. SECTION 702.2 AND INSTALLED PER SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). A MINIMUM OF 36" DEPTH OF COVER SHALL BE MAINTAINED BY ALL UNDERGROUND FACILITIES INSTALLED IN THE ALLEY AND THE ALLEY SURFACE OVER AND ADJACENT TO THE TRENCH SHALL BE NEAT AND CLEAN OF ALL SPOILS.

   EXCEPTION: IF A TRENCH IS 24" WIDE OR WIDER, NATIVE MATERIAL MAY BE USED AS BACKFILL TO WITHIN 6" OF FINISHED GRADE AND INSTALLED PER MAG SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). THE TOP 6" OF THE TRENCH BACKFILL SHALL BE COMPLETED WITH AGGREGATE BASE. ALL TRENCH SPOILS ADJACENT TO THE TRENCH SHALL BE REMOVED FROM THE AREA AND THE ALLEY LEFT IN A NEAT AND CLEAN CONDITION.
10. WHEN CONTRACTORS OR UTILITY COMPANIES CALL IN FOR BLUESTAKING OR CONSTRUCTION AREAS, "SEMI-PERMANENT", OR APPROVED ALTERNATE 3-6 MONTH DURATION BLUE-STAKE PAINT SHALL BE SPECIFIED. IN ADDITION, "STAKE CHASERS" WILL BE SPECIFIED FOR MARKING ACROSS LANDSCAPED YARDS/AREAS.

    UTILITY COMPANIES OR CONTRACTORS FOR UTILITY COMPANIES THAT EMPLOY INDISCRIMINATE/EXCESSIVE BLUE-STAKE MARKING ACROSS RESIDENTIAL/BUSINESS DRIVEWAYS OR YARDS WILL BE RESPONSIBLE FOR RESTORING RIGHT-OF-WAY, UTILITY EASEMENT, AND/OR ADJOINING PROPERTY OWNERS AREA TO ITS ORIGINAL UNMARKED CONDITION.

    EXCEPTION: FOR LONG DURATION CONSTRUCTION PROJECTS ON MAJOR ARTERIALS OR MAJOR STREETS, OR CERTAIN SPECIALTY TYPE CONSTRUCTION PROJECTS, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE LONGER DURATION BLUE-STAKE PAINT. IN ADDITION, IF THE REMOVAL OF "STAKE CHASERS" OCCURS OR IS EXPECTED TO RESULT, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE BLUE STAKE PAINT MARKING ACROSS LANDSCAPED AREAS.
11. UTILITY CLEARANCE REQUIREMENTS: ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

    A SIX-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER MAINS. ALL FIRE LINES, REGARDLESS OF SIZE (INCLUDING HYDRANTS AND OTHER FIRE SERVICE CONNECTIONS) ARE CONSIDERED MAINS.

    A THREE-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER SERVICES. REFER TO M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS FOR HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) CLEARANCE REQUIRMENTS.

    A TWO-FOOT MINIMUM VERTICAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF ANY WET UTILITIES.

    FOR ADDITIONAL INFORMATION REGARDING STANDARD UTILITY LOCATIONS REFER TO THE CITY OF CHANDLER STANDARD DETAILS AND SPECIFICATIONS, STREET SERIES, C-200 – C-259.

    DEPTH REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF CHANDLER MINIMUM COVER REQUIREMENTS OR AT THE DISCRETION OF THE CITY ENGINEER.

SRP NOTE

1. SRP'S CONTRACTOR WILL CONSTRUCT THE IRRIGATION DELIVERY STRUCTURE LOCATED ON THE NORTHEAST CORNER OF CAROB DRIVE AND HAMILTON STREET AND 8' IRRIGATION PIPE STUB OUTS FROM THE STRUCTURE. THE CITY'S CONTRACTOR WILL CONSTRUCT THE REMAINING SRP FACILITIES AS WELL AS REMOVE EXISTING SRP FACILITIES.

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 3/31/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	03/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
GENERAL NOTES

CITY PROJECT NO.
ST2007.401

DWG. NO.
GN02

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	E	ELECTRIC(ITY)	POT	POINT ON TANGENT
		e	EXTERNAL	PP	POWER POLE
		EC	END OF CURVE	PRC	POINT OF REVERSE CURVATURE
ABC	AGGREGATE BASE COURSE	ECR	END CURB RETURN	Prel	PRELIMINARY
AC	ASHPALTIC CONCRETE	EFS	END FULL SUPER ELEVATION	PROJ	PROJECT
ACFC	ASPHALT CONCRETE FRICTION COURSE	EL	ELEVATION	P/L	PROPERTY LINE
		EMB	EMBANKMENT	PROP	PROPOSED
ACI	AMERICAN CONCRETE INSTITUTE	EP	EDGE OF PAVEMENT	PRVC	POINT OF REVERSE VERTICAL CURVATURE
		ESMT	EASEMENT		
ACP	ASBESTOS CONCRETE PIPE	EXC	EXCAVATION	PT	POINT OF TANGENCY
ACSC	ASPHALT CONCRETE SURFACE COURSE	EVC	END VERTICAL CURB	PVC	POINT OF VERTICAL CURVATURE
		EXIST	EXIST(ING)	PVC	POLY VINYL CHLORIDE
ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION	EXP JT	EXPANSION JOINT	PVI	POINT OF VERTICAL INTERSECTION
		EVAC	EAST VALEY ASPHALT COMMITTEE	Pvmt	PAVEMENT
				PVT	POINT OF VERTICAL TANGENCY
Ahd	AHEAD				
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	F/C	FACE OF CURB	Q	QUANTITY OF DRAINAGE RUNOFF
		FCDMC	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	Qtr	QUARTER
Applic	APPLICATION				
APS	ARIZONA PUBLIC SERVICE COMPANY				
Asph	ASPHALT	FF	FINISHED FLOOR (ELEVATION)	R	RADIUS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	FG	FINISHED GRADE (UNPAVED)	R	RANGE
		FH	FIRE HYDRANT	RCP	REINFORCED CONCRETE PIPE
		Fnd	FOUND	Rdwy	ROADWAY
BC	BRASS CAP	FRWY	FREEWAY	REBAR	REINFORCING BAR
BOC	BEGINNING OF CURVE	FS	FINISHED SURFACE (PAVED)	Reinf	REINFORCED(ING)
B/C	BACK OF CURB			Reloc	RELOCATE
BCR	BEGIN CURB RETURN	G	GUTTER (FLOWLINE ELEVATION)	Rem	REMOVE
BCT	BREAKAWAY CABLE TERMINAL	ga	GAUGE	Ret	RETAIN(ING)
Bdy	BOUNDARY	GB	GRADE BREAK	RGRCP	RUBBER GASKET REINFORCED CONCRETE PIPE
Bev	BEVEL(ED)	GM	GAS METER		
BFS	BEGIN FULL SUPER ELEVATION	Gnd	GROUND	RR	RAILROAD
BIT	BITUMINOUS	GP	GUY POLE	RT	RIGHT
Bk	BACK	Gr	GRADE	R/W	RIGHT OF WAY
Bkfl	BACKFILL	GR	GUARDRAIL		
BLM	BUREAU OF LAND MANAGEMENT	GRIC	GILA RIVER INDIAN COMMUNITY	S	SLOPE
BM	BENCHMARK	GV	GAS VALVE	SCH	SCHEDULE
Br	BRIDGE			SCS	SOIL CONSERVATION SERVICE
BVC	BEGIN VERTICAL CURB	HDPE	HIGH DENSITY POLYETHYLINE	SD	STORM DRAIN
		HDWL	HEADWALL	SE	SLOPE EASEMENT
C&G	CURB AND GUTTER	HH	HAND HOLE	SEC	SECTION
CAP	CORRUGATED ALUMINUM PIPE	HW	HIGH WATER	SM	SQUARE METER
CAPA	CORRUGATED ALUMINUM PIPE ARCH			SG	SUBGRADE
		ID	INSIDE DIAMETER	Shldr	SHOULDER
CB	CATCH BASIN	INV	INVERT	Shr	SHRINKAGE
CBC	CONCRETE BOX CULVERT	Irr	IRRIGATION	SHT	SHEET
COC	CITY OF CHANDLER			SK	SKEW
CM	CUBIC METER	L	LENGTH OF CURVE	SM	SELECT MATERIAL
CG	CATTLE GUARD	LC	LONG CHORD	SPECS	SPECIFICATIONS
CIP	CAST IRON PIPE	LM	LINEAR METER	SRP	SALT RIVER PROJCT
C/L	CENTERLINE	LS	LUMP SUM	SS	SANITARY SEWER
COM	CITY OF MESA	LT	LEFT	STA	STATION
COND	CONDUIT			STLT	STREET LIGHT
COP	CITY OF PHOENIX	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	Struc	STRUCTURAL
COS	CITY OF SCOTTSDALE			SUBDIV	SUBDIVISION
CIPP	CAST-IN-PLACE PIPE	MATL	MATERIAL	SUPER	SUPERELEVATION
CLR	CLEAR(ANCE)	MC	MARICOPA COUNTY	SW	SWELL
CLD	CONCRETE LINED DITCH	MCDOT	MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION	S/W	SIDEWALK
CMP	CORRUGATED METAL PIPE			SWG	SOUTHWEST GAS CORPORATION
CO	CLEAN OUT	MH	MANHOLE		
CONC	CONCRETE	MAX	MAXIMUM	T	TANGENT LENGTH
CONN	CONNECTION	MIN	MINIMUM	T	TOWNSHIP
CST	CONSTRUCTION	MOC	MIDDLE OF CURVE	TBM	TEMPORARY BENCH MARK
CONT	CONTINUOUS	MOD	MODIFY	TC	TOP OF CURB
CP	CONTROL POINT	MON	MONUMENT	TCE	TEMPORARY CONSTRUCTION EASEMENT
COR	CORNER			Tech	TECHNICAL
CORR	CORRECTION (VPI TO VC)	NC	NORMAL CROWN	T/F	TOP OF FOOTING
CR	CROWN	NG	NATURAL GROUND	TOE	TOP OF EMBANKMENT
CSP	CORRUGATED STEEL PIPE	NPI	NON-PAY ITEM	Trans	TRANSITION
CSPA	CORRUGATED STEEL PIPE ARCH	NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	TREN	TRENCH
				TrRk	TRASH RACK
CTB	CONCRETE TREATED BASE	NTS	NOT TO SCALE	TS	TRAFFIC SIGNAL POLE
				T/W	TOP OF WALL
DA	DRAINAGE AREA	OC	ON CENTER	TYP	TYPICAL
DDL	DUST TO DAWN LIGHT	OD	OUTSIDE DIAMETER		
DE	DRAINAGE EASEMENT			VC	VERTICAL CURVE
Def	DEFLECTION	P	PAVEMENT (SURFACE ELEVATION)	VCP	VITRIFIED CLAY PIPE
Det	DETAIL	Ped	PEDESTAL	VG	VALLEY GUTTER
DG	DECOMPOSED GRANITE	PC	POINT OF CURVATURE	VNAE	VEHICULAR NON-ACCESS EASEMENT
DIP	DUCTILE IRON PIPE	POCC	POINT OF COMPOUND CURVATURE		
Dm	DRAIN(AGE)	PCC	PORTLAND CEMENT CONCRETE	W/	WITH
Dr	DRIVE	PI	POINT OF INTERSECTION	W/O	WITHOUT
D/W	DRIVEWAY	PL	PLACE	WM	WATER METER
DWG	DRAWING	PKWY	PARKWAY	WV	WATER VALVE
		POC	POINT ON CURVE	WWF	WELDED WIRE FABRIC

SYMBOLS

- G.B. - GRADE BREAK
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- CENTER OR MONUMENT LINE
- EASEMENT LINE
- DISTRICT BOUNDARY OR CITY LIMITS
- 14 / 3 — SHEET NO. over DETAIL NO.
- B / 10 — TYPE OF PAVEMENT REPLACEMENT over NO. OF SQ. YARDS
- 1 — COMPACTION CLASS
- BENCH MARK
- 1349.51 / 1351.00 — EXISTING ELEVATION / PROPOSED ELEVATION
- X — WIRE FENCE
- MASONRY AND WROUGHT IRON FENCE
- MASONRY FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- BARRICADE
- RIP RAP
- TRAFFIC SIGN
- TC 1351.00 G 1350.50 — EXISTING CURB AND GUTTER ELEVATION
- TC 1351.00 G 1350.50 — PROPOSED CURB AND GUTTER ELEVATION
- ELECTRICAL BALL MARKER
- 18" S — EXISTING SEWER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" S — EXISTING SEWER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- 18" S — NEW SEWER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" S — NEW SEWER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- SEWER SERVICE
- S — SEWER MANHOLE
- DROP SEWER CONNECTION
- S — SEWER CLEAN OUT
- CORP STOP
- 18" SD — EXISTING STORM DRAIN LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" SD — EXISTING STORM DRAIN LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- 18" SD — STORM DRAIN LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 24" — IRRIGATION LINE
- SECTION LINE
- RAILROAD
- POWER OR JOINT LINE
- "L" HEADWALL
- 12" SD — STORM DRAIN LINE & SIZE (15" OR SMALLER AT 20 SCALE)

- GUTTER INLET
- CURB INLET
- 18" SD — EXISTING IRRIGATION LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" SD — EXISTING IRRIGATION LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- 18" CP — IRRIGATION LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" CP — IRRIGATION LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- CONCRETE LINED DITCH
- DIRT DITCH
- CENTER OF STREAM (W/DIRECTION OF FLOW - ℄)
- TOP OF BANK TOE OF SLOPE
- EXISTING TOP OF BANK EXISTING TOE OF SLOPE
- IRRIGATION BERM
- IRRIGATION JUNCTION BOX
- WING TYPE HEADWALL
- PLAIN HEADWALL
- IRRIGATION STANDPIPE
- ALFALFA VALVE
- EDGE OF EXISTING PAVEMENT (NO CURB)
- NATURAL GROUND IN A PROFILE
- NEW VERTICAL CURB & GUTTER
- EXIST VERTICAL CURB & GUTTER
- NEW ROLL CURB & GUTTER
- EXIST ROLL CURB & GUTTER
- 46 — FINISHED GRADE CONTOUR
- NEW SINGLE VERTICAL CURB
- EXIST SINGLE VERTICAL CURB
- CONCRETE SAFETY CURB
- CONCRETE VALLEY GUTTER (W/DIRECTION OF FLOW)
- EP — EDGE OF EXISTING PAVEMENT
- EDGE OF PROPOSED PAVEMENT W/THICKENED EDGE
- WING TYPE DRIVEWAY
- RETURN TYPE DRIVEWAY
- CONCRETE APRON
- SURVEY MONUMENT (BRASS CAP, STONE, ETX. IN HAND HOLE)
- SURVEY MONUMENT (BRASS CAP ON SURFACE)
- SURVEY MONUMENT (REBAR OR PIPE)
- WATER OR GAS VALVE
- DIP — DUCTILE IRON PIPE
- TEE
- CROSS
- BEND
- V.B.& C. — VALVE BOX & COVER
- DELINEATOR
- COMMERCIAL SIGN

- TAPPING SLEEVE & VALVE
- FH — FIRE HYDRANT
- THRUST BLOCK
- METER BOX & SERVICE
- REDUCER
- STREET SIGN
- MAIL BOX
- EXISTING STREETLIGHT
- NEW STREETLIGHT
- UTILITY POLE
- GUY ANCHOR
- TRAFFIC SIGNAL LIGHT (DIRECTION LIGHT FACES)
- 18" W — EXISTING WATER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" W — EXISTING WATER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- 18" W — WATER LINE & SIZE (18" OR LARGER AT 20 SCALE)
- 12" W — WATER LINE & SIZE (15" OR SMALLER AT 20 SCALE)
- 6" W — EXISTING WATER LINE
- T — EXISTING TELEPHONE LINE
- 8" G — EXISTING GAS LINE
- 12" SD — EXISTING STORM DRAIN LINE
- 12" IRR — EXISTING IRRIGATION LINE
- 2" G — GAS LINE & SIZE
- 2" HPG — HIGH PRESSURE GAS LINE
- TV — TELEVISION CABLE
- TS COND — TRAFFIC SIGNAL CONDUIT
- GAS METER
- PALM TREE (SHOW HEIGHT)
- TREE (KIND & TRUNK DIA.)
- EVERGREEN TREE (KIND & TRUNK DIA.)
- HEDGE
- A/C PAVEMENT
- CONCRETE UNDERLAY
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT SECTION
- SUBGRADE SEAL SECTION
- SELECT MATERIAL SECTION
- AGGREGATE BASE SECTION
- BITUMINOUS PAVEMENT SECTION
- EXISTING PAVEMENT
- OBLITERATE PAVEMENT
- BITUMINOUS PAVEMENT
- PROJECT LIMITS

Notes:

1. PLANS SHALL BE OF A QUALITY TO ALLOW MICROFILMING, (I.E. LINE WEIGHT AND LETTER SIZE SHALL BE EASILY READ WHEN REDUCED BY 50%)
2. EXISTING IMPROVEMENTS SUCH AS CURB, GUTTER, SIDEWALK, DRIVEWAYS, ETC. SHALL BE SHOWN BY DASHED LINES.
3. ALL PROPOSED CONSTRUCTION NOTES SHALL BE BOXED
4. DO NOT USE △ EXCEPT FOR POST-APPROVAL REVISIONS.
5. STANDARD DICTIONARY ABBREVIATIONS NOT INCLUDED.
6. A LEGEND IDENTIFYING THE SYMBOLS USED FOR THE FOLLOWING ITEMS MUST BE SHOWN ON THE COVER, OR DETAIL SHEET.

A. EXISTING TOP-OF-CURB ELEVATIONS.
B. EXISTING GROUND ELEVATIONS.
C. PROPOSED TOP-OF-CURB ELEVATIONS.
D. PROPOSED GROUND ELEVATIONS.
E. PROPOSED FINISHED FLOOR AND PAD ELEVATIONS.
F. EXISTING CONTOUR LINES.
G. PROPOSED CONTOUR LINES.
H. ARROWS DESIGNATING DIRECTION OF DRAINAGE FLOW.
I. DRAINAGE STRUCTURES.
J. GRADE BREAKS.

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — 50900 KEVIN R. THOMAS — Date Signed 10/30/23 — ARIZONA U.S.A. — CIVIL — Expires 06/30/25

SCALE (H):	N/A	DESIGNED BY:	KRT
SCALE (V):	N/A	DRAWN BY:	TV
CHECKED BY:	RPW	DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

LEGEND, ABBREVIATIONS & NOTES

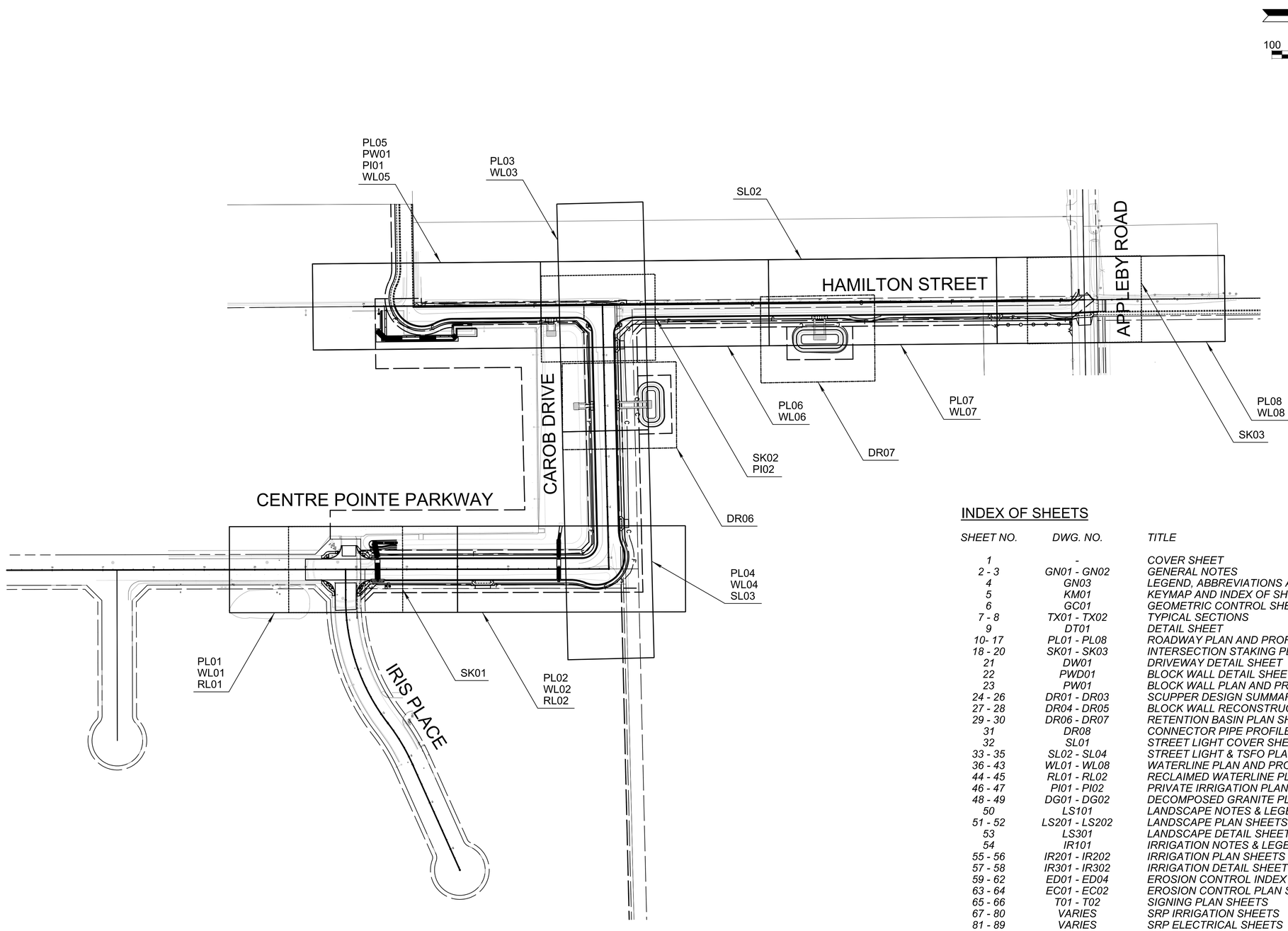
CITY PROJECT NO.
ST2007.401

DWG. NO.
GN03

4 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-9348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/3/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=100'
SCALE (V):	N/A
DESIGNED BY:	KRT
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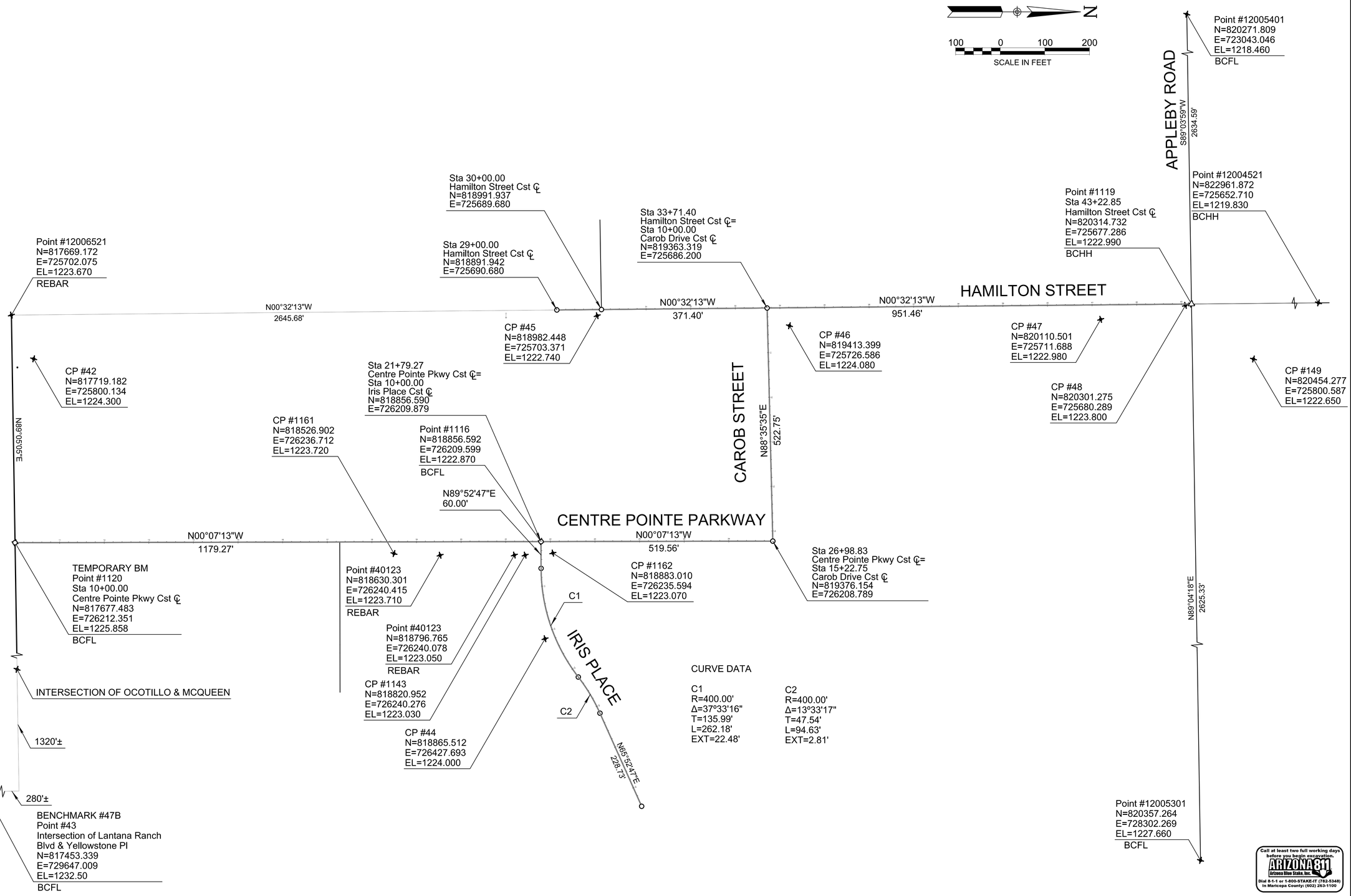
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
KEYMAP AND INDEX OF SHEETS

CITY PROJECT NO.
ST2007.401

DWG. NO.
KM01

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
GEOMETRIC CONTROL SHEET

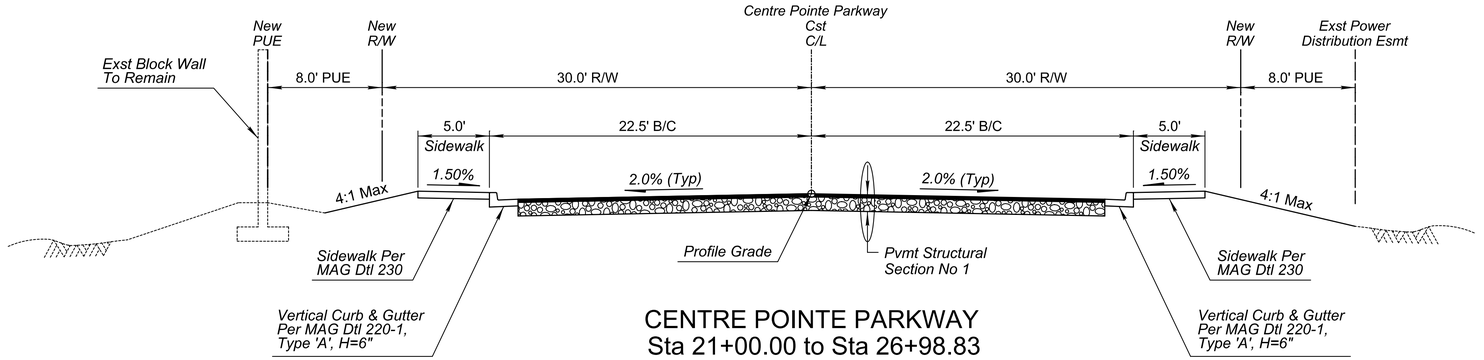
CITY PROJECT NO.
ST2007.401

DWG. NO.
GC01

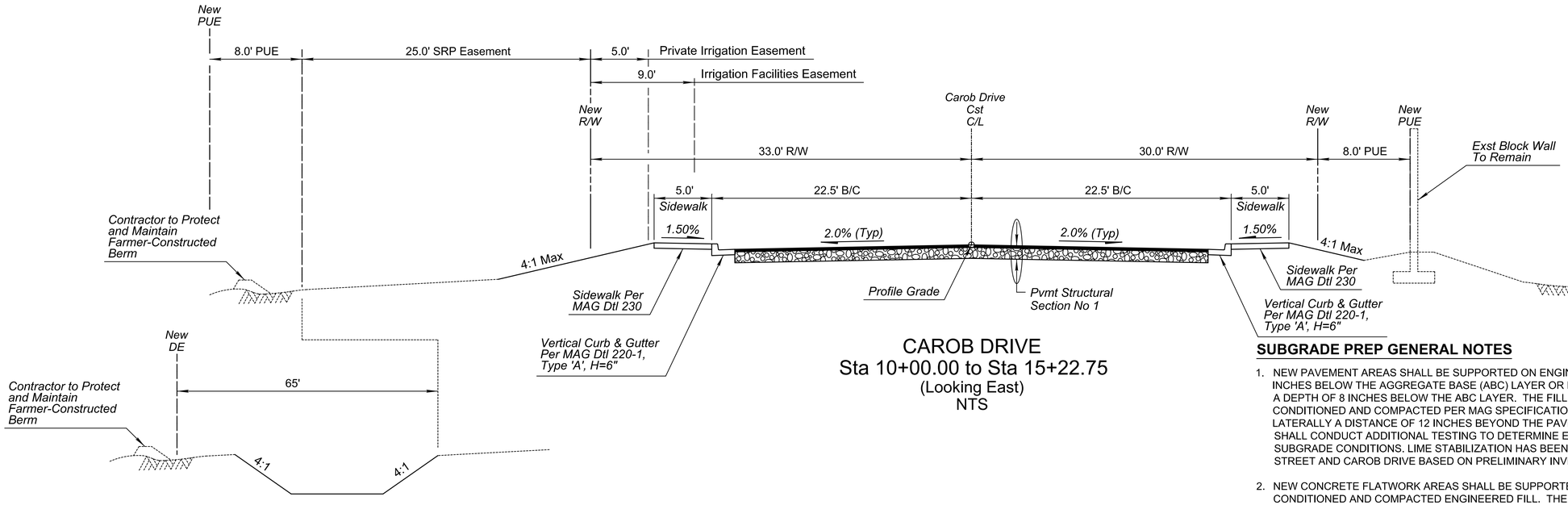
6 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CENTRE POINTE PARKWAY
Sta 21+00.00 to Sta 26+98.83
(Looking North)
NTS

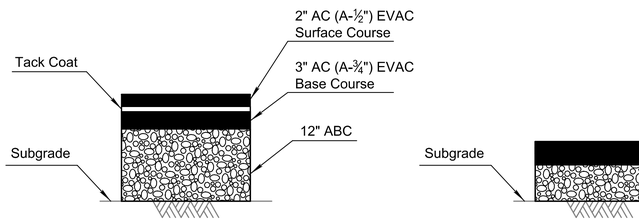


CAROB DRIVE
Sta 10+00.00 to Sta 15+22.75
(Looking East)
NTS

@ RETENTION BASIN

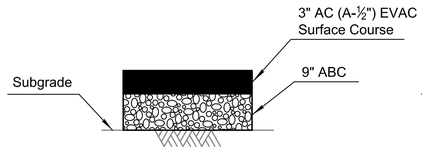
SUBGRADE PREP GENERAL NOTES

1. NEW PAVEMENT AREAS SHALL BE SUPPORTED ON ENGINEERED FILL THAT EXTENDS 18 INCHES BELOW THE AGGREGATE BASE (ABC) LAYER OR LIME OR CEMENT STABILIZATION FOR A DEPTH OF 8 INCHES BELOW THE ABC LAYER. THE FILL SHALL BE MOISTURE CONDITIONED AND COMPACTED PER MAG SPECIFICATIONS. THE LIMITS SHALL EXTEND LATERALLY A DISTANCE OF 12 INCHES BEYOND THE PAVEMENT FOOTPRINT. CONTRACTOR SHALL CONDUCT ADDITIONAL TESTING TO DETERMINE EXACT LIMITS AND DEPTHS OF SUBGRADE CONDITIONS. LIME STABILIZATION HAS BEEN ESTIMATED FOR HAMILTON STREET AND CAROB DRIVE BASED ON PRELIMINARY INVESTIGATIONS.
2. NEW CONCRETE FLATWORK AREAS SHALL BE SUPPORTED ON 12 INCHES OF MOISTURE-CONDITIONED AND COMPACTED ENGINEERED FILL. THE LIMITS SHALL EXTEND 12 INCHES HORIZONTALLY BEYOND THE EDGES OF THE FLATWORK.
3. MOISTURE CONDITION AND PLACE FILL AND BACKFILL MATERIALS REQUIRED TO ACHIEVE SPECIFIED GRADES. FILL MATERIALS SHOULD BE MOISTURE CONDITIONED, PLACED, AND COMPACTED IN HORIZONTAL LIFTS OF THICKNESS COMPATIBLE WITH THE COMPACTION EQUIPMENT BEING USED.
4. NO SEPERATE PAYMENT WILL BE MADE FOR SCARIFYING AND MOISTURE CONDITIONING MATERIALS. THE COST IS CONSIDERED INCIDENTAL TO THE COST OF OTHER ITEMS.
5. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.



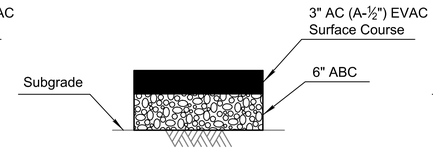
Total Thickness = 17"

PAVEMENT STRUCTURAL SECTION NO. 1



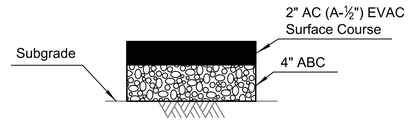
Total Thickness = 12"

PAVEMENT STRUCTURAL SECTION NO. 2



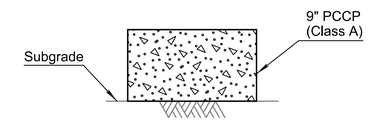
Total Thickness = 9"

PAVEMENT STRUCTURAL SECTION NO. 3



Total Thickness = 6"

PAVEMENT STRUCTURAL SECTION NO. 4



Total Thickness = 9"

PAVEMENT STRUCTURAL SECTION NO. 5

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Phoenix, Arizona 85012

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Date Signed 10/03/23
ARIZONA U.S.A.
Expir-es 06/30/25

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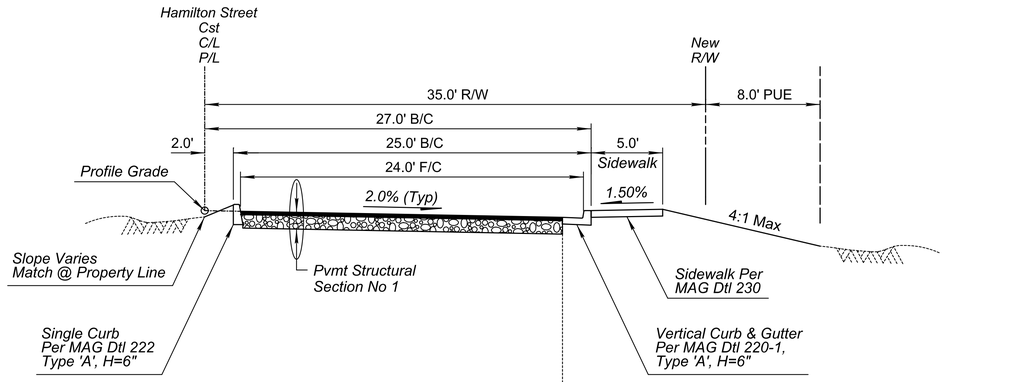
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
TYPICAL SECTIONS

CITY PROJECT NO.
ST2007.401

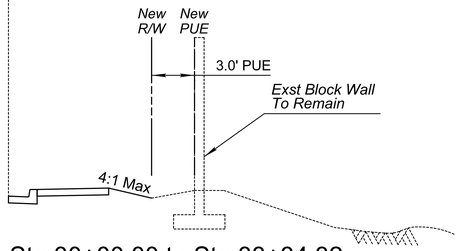
DWG. NO.
TX01

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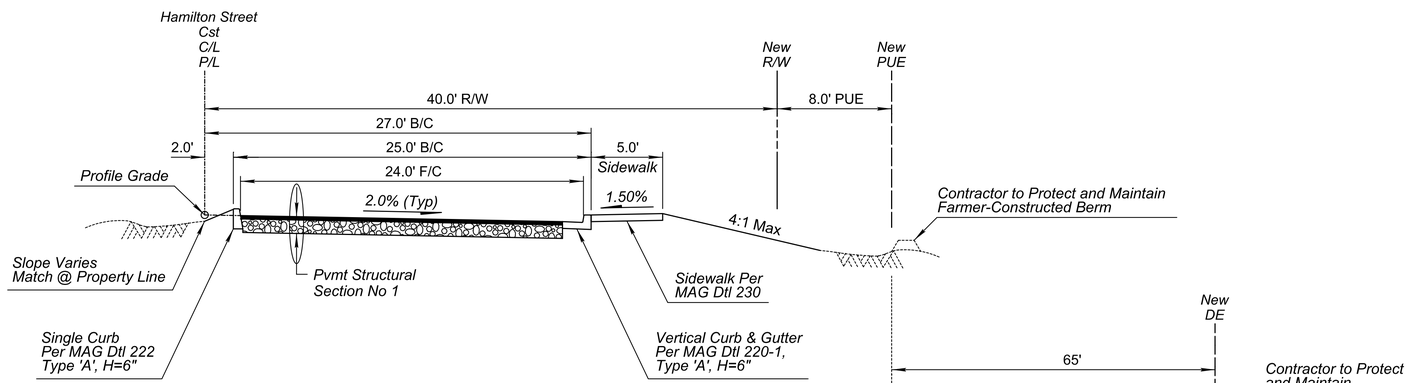
C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



HAMILTON STREET
Sta 30+00.00 to Sta 33+71.40
(Looking North)
NTS



Sta 30+00.00 to Sta 33+34.32



HAMILTON STREET
Sta 33+71.40 to Sta 43+48.02
(Looking North)
NTS

@ RETENTION BASIN

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Phoenix, Arizona 85012

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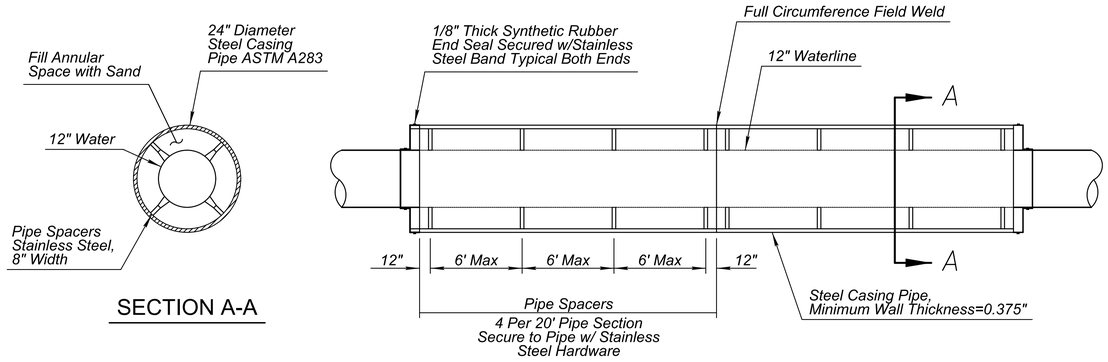
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
TYPICAL SECTIONS

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DWG. NO.
TX02

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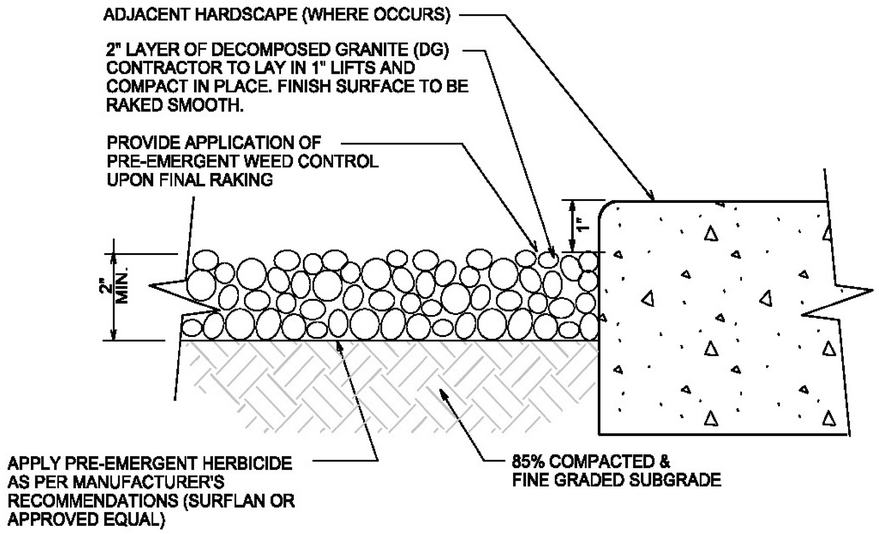
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SECTION A-A

DETAIL B

STEEL CASING PIPE
NTS



NOTES:
1. ALL D.G. SLOPES IN EXCESS OF 6:1 SHALL BE COMPACTED BY WATER & ROLLING.

2. CONTRACTOR TO PROVIDE PROPOSED D.G. SAMPLE TO CITY OF CHANDLER FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION.

Note:
See the Technical Specifications for Decomposed Granite Gradation Information.

DETAIL A

DECOMPOSED GRANITE

Call at least two full working days before you begin excavation.
ARIZONA 811
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Expires 06/30/25

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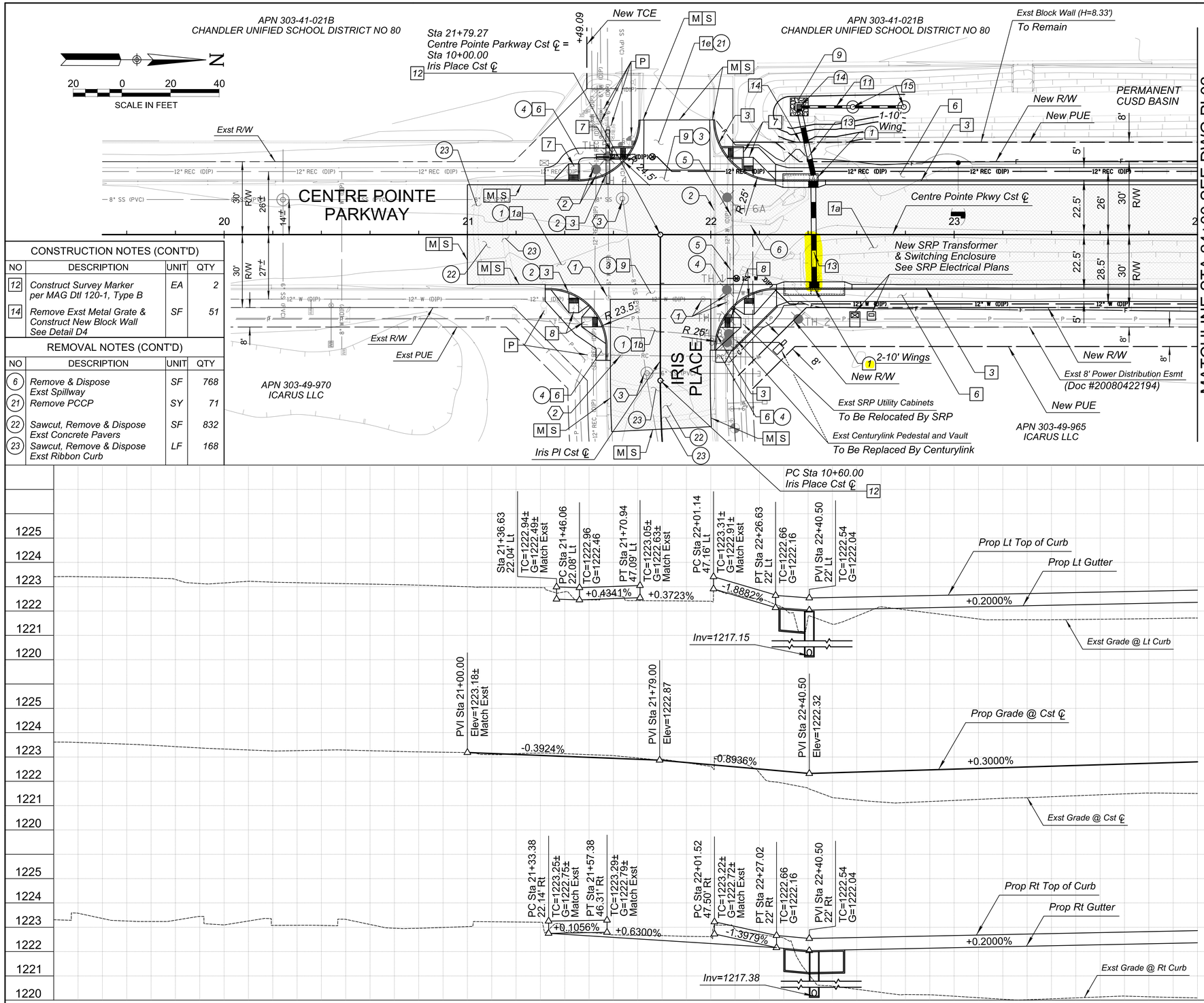
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

MISCELLANEOUS DETAILS

CITY PROJECT NO.
ST2007.401

DWG. NO.
DT01

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



CONSTRUCTION NOTES (CONT'D)

NO	DESCRIPTION	UNIT	QTY
12	Construct Survey Marker per MAG Dtl 120-1, Type B	EA	2
14	Remove Exst Metal Grate & Construct New Block Wall See Detail D4	SF	51

REMOVAL NOTES (CONT'D)

NO	DESCRIPTION	UNIT	QTY
6	Remove & Dispose Exst Spillway	SF	768
21	Remove PCCP	SY	71
22	Sawcut, Remove & Dispose Exst Concrete Pavers	SF	832
23	Sawcut, Remove & Dispose Exst Ribbon Curb	LF	168

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	1,362
1b	Construct New AC Pavement per Structural Section No 2	SY	244
1e	Construct New PCCP per Structural Section No 5	SY	62
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	524
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	2,035
7	Construct New Concrete Directional Curb Ramp per COC Dtl C-257 (Modified), and Align per COC Ctl C-249 See Sheet SK01	SF	202
8	Construct New Concrete Directional Curb Ramp per COC Dtl C-258 (Modified), and Align per COC Ctl C-249 See Sheet SK01	SF	319
9	Construct New Concrete Valley Gutter & Apron per MAG Dtl 240	SF	1,012

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
1	Construct Catch Basin per MAG Dtl 533-1 w/ Storm Drain Inlet Marker per COC Dtl C-508, Wings Per Plan	EA	2
9	Dumped Riprap, D50=6", T=12" See Sheet DR01 for Gradation	CY	2
11	12" RGRCP Storm Drain Pipe Class III	LF	20
13	24" RGRCP Storm Drain Pipe Class III	LF	71
14	Construct Retention Basin Single Inlet (Bubbler Box) per COC Dtl C-507	EA	1
15	Construct Drywell System per COC Dtl C-501	EA	1

UTILITY NOTES

NO	DESCRIPTION	UNIT	QTY
1	Frame & Cover Grade Adjustment MAG Dtl 391-1, Type 'C', and per COC Dtl C-307 and C-317	EA	4
2	Frame & Cover Grade Adjustment MAG Dtl 391-1, Type 'C', and per COC Dtl C-406	EA	3
3	Manhole Frame & Cover Adjustment MAG Dtl 422 and per COC Dtl C-401, Type 'A'	EA	2

REMOVAL NOTES

NO		UNIT	QTY
1	Sawcut, Remove & Dispose Exst AC Pavement & Subbase	SY	586
2	Sawcut, Remove & Dispose Exst Curb and Gutter	LF	193
3	Sawcut, Remove & Dispose Exst Valley Gutter & Apron	SF	1,095
4	Sawcut, Remove & Dispose Exst Sidewalk	SF	612
5	Remove and Dispose Exst Scupper	SF	198

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet SK01 for Staking Plan.
3. See Sheet DR08 for Storm Drain Profile.
4. See Sheet SL3 for Street Lighting Plan.
5. See Sheet WL01 for Waterline Plan & Profile.
6. See Sheet RL01 for Reclaimed Waterline Plan & Profile.

M Match
P Protect
S Sawcut

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CITY OF CHANDLER
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IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PLAN & PROFILE
STA 19+50 TO STA 24+00

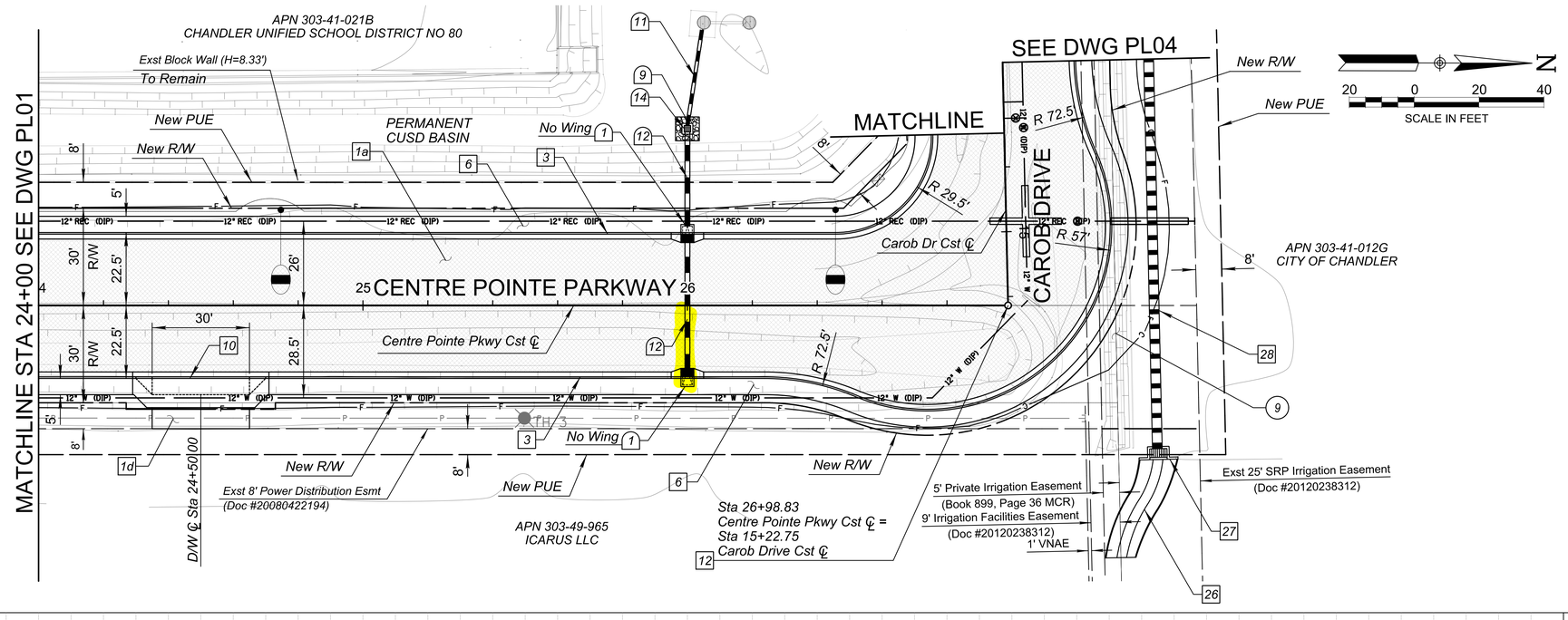
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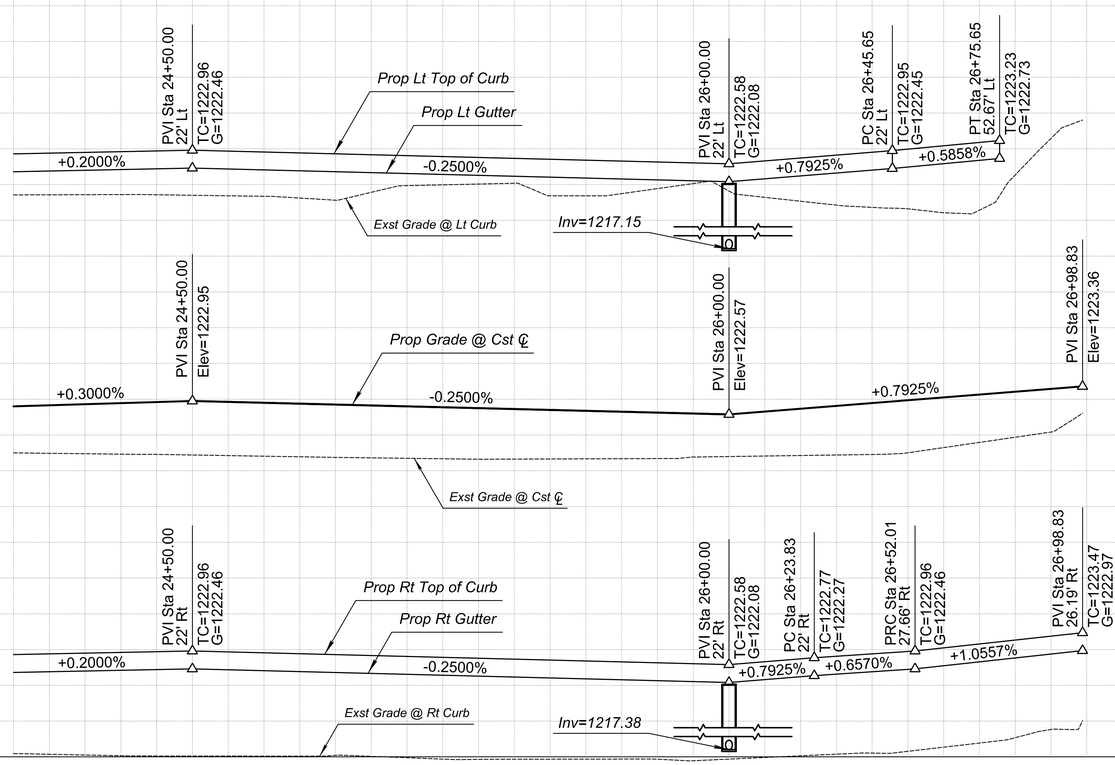
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PL01

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	1,767
1d	Construct New AC Pavement per Structural Section No 4	SY	22
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	711
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	3,303
10	Construct New Concrete Driveway per MAG Dtl 250-2	SF	295
12	Construct Survey Marker per MAG Dtl 120-1, Type B	EA	1
26	Construct SRP Concrete Lined Ditch	LF	32
27	Construct SRP Headwall with Trash Rack	EA	1
28	Construct SRP 36" Irrigation Pipe	LF	120

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
1	Construct Catch Basin per MAG Dtl 533-1 with Storm Drain Inlet Marker per COC Dtl C-508, Wings Per Plan	EA	2
9	Dumped Riprap, D50=6", T=12" See Sheet DR01 for Gradation	CY	2
11	12" RGRCP Storm Drain Pipe Class III	LF	30
12	18" RGRCP Storm Drain Pipe Class III	LF	73
14	Construct Retention Basin Single Inlet (Bubbler Box) per COC Dtl C-507	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	154

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet DW01 for Driveway Details.
3. See Sheet DR08 for Storm Drain Profile.
4. See Sheet SL3 for Street Lighting Plan.
5. See Sheet WL02 for Waterline Plan & Profile.
6. See Sheet RL02 for Reclaimed Waterline Plan & Profile.

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Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 50900 KEVIN R. THOMAS Date Signed 10/30/23 ARIZONA U.S.A. Expires 06/30/25

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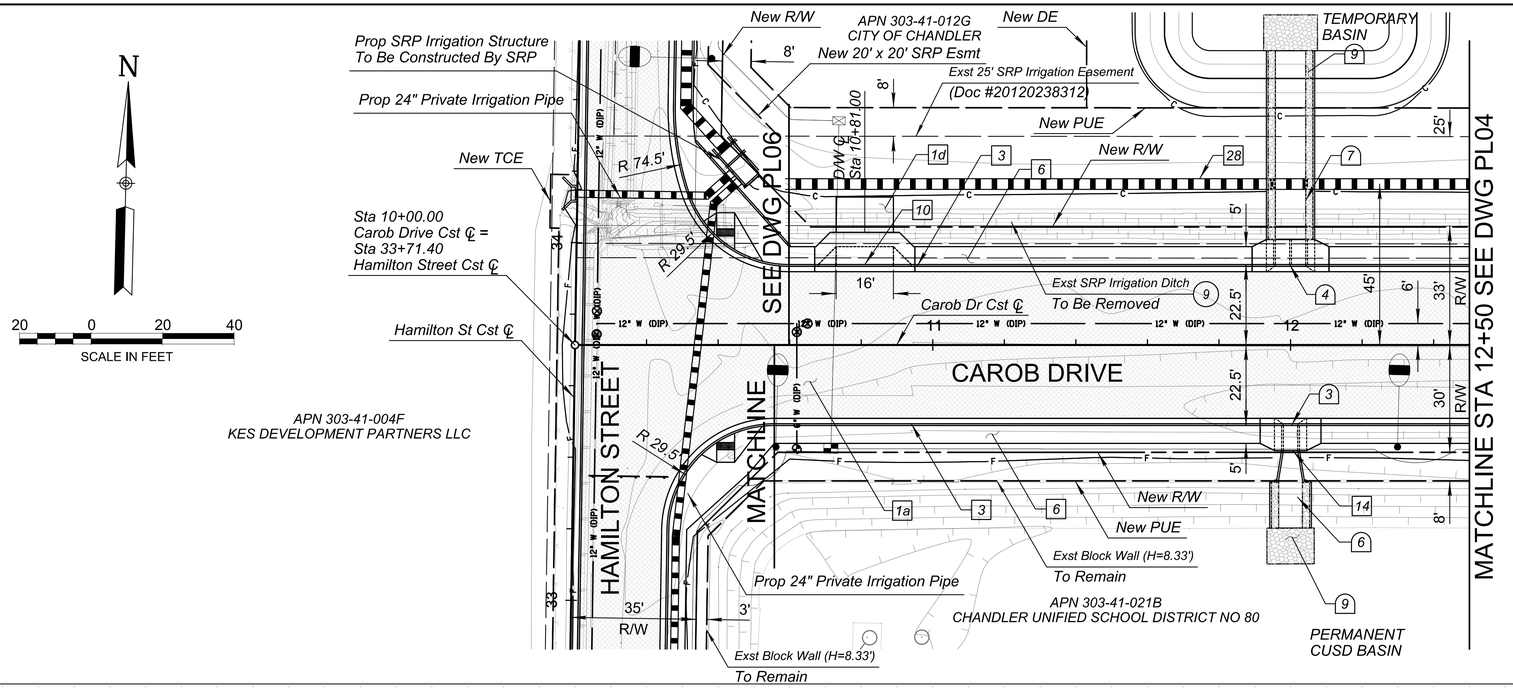
CITY OF CHANDLER
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IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PLAN & PROFILE
STA 24+00 TO STA 26+98.83

CITY PROJECT NO.
ST2007.401

DWG. NO.
PL02

11 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	876
1d	Construct New AC Pavement per Structural Section No 4	SY	18
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	384
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	1,654
10	Construct New Concrete Driveway per MAG Dtl 250-2	SF	169
14	Remove & Reconstruct Exst Block Wall	SF	112
28	Construct SRP 36" Irrigation Pipe	LF	190

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
3	Construct Concrete Scupper per COC Dtl C-500, 1 - 4' Curb Opening with Storm Drain Inlet Marker per COC Dtl C-508	EA	1
4	Construct Concrete Scupper per COC Dtl C-500, 2 - 4' Curb Openings with Storm Drain Inlet Marker per COC Dtl C-508	EA	1
6	Construct Concrete Spillway per COC Dtl C-500, W=4'	LF	22
7	Construct Concrete Spillway per COC Dtl C-500, W=8.5'	LF	71
9	Dumped Riprap, D50=6", T=12" See Sheet DR01 for Gradation	CY	20

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	190

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet DW01 for Driveway Details.
3. See Sheet SK02 for Staking Plan.
4. See Sheet DR06 for Retention Basin Details.
5. See Sheet SL2 & SL3 for Street Lighting Plan.
6. See Sheet WL03 for Waterline Plan & Profile.
7. See Sheet PI01 & PI02 for Private Irrigation Plan
8. See SRP Plans for SRP Irrigation.

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P Protect
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In Maricopa County: (602) 263-1100

BY	DATE	REVISIONS	No.

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

50900
KEVIN R. THOMAS
Date Signed 10/06/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
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DATE:	10/2023

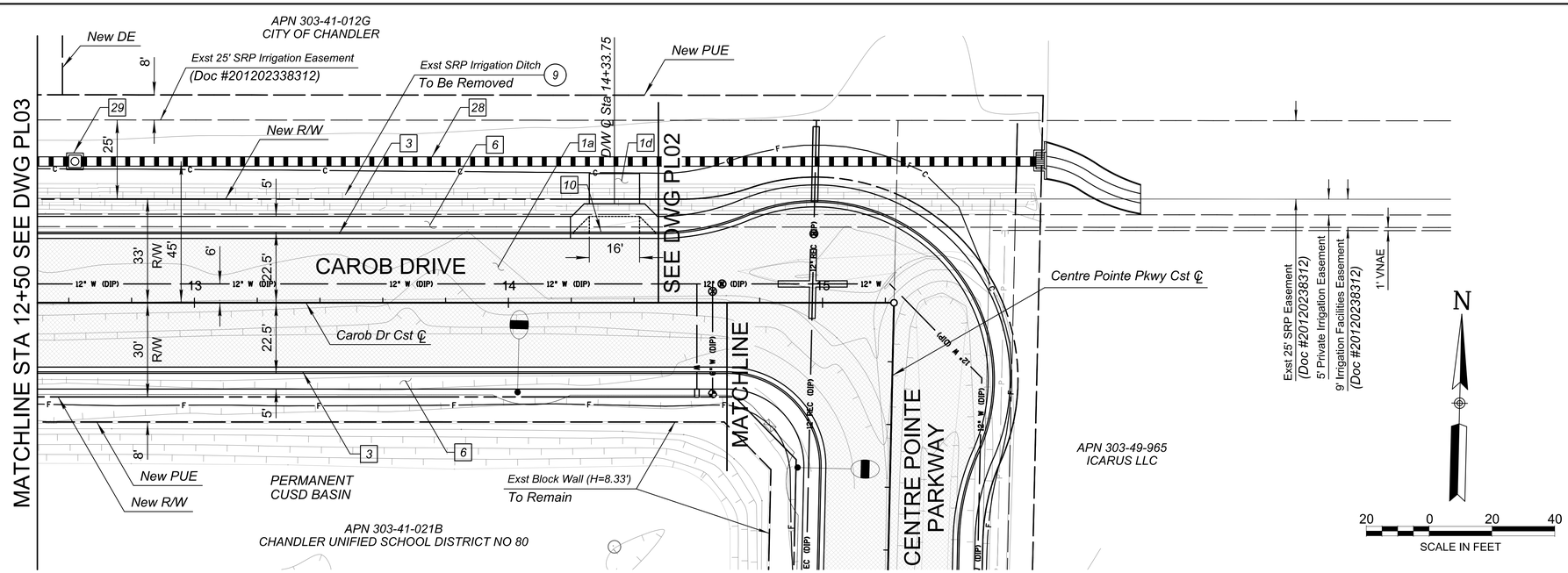
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CAROB DRIVE PLAN & PROFILE
STA 10+00 TO STA 12+50

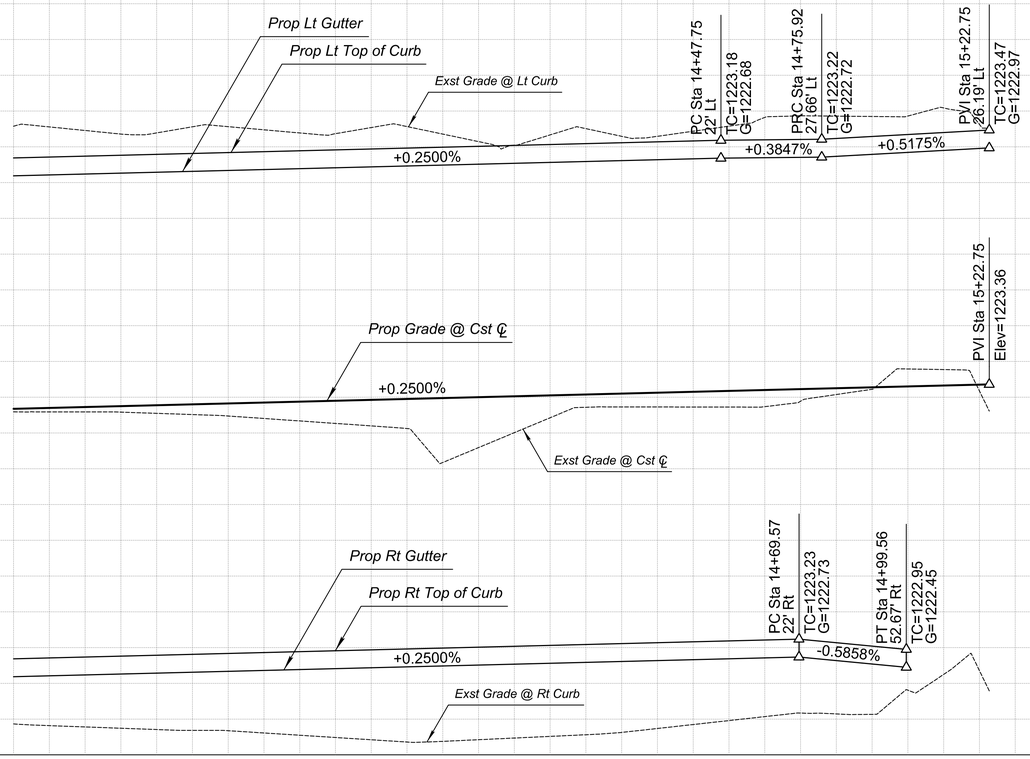
CITY PROJECT NO.
ST2007.401

DWG. NO.
PL03

12 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	951
1d	Construct New AC Pavement per Structural Section No 4	SY	17
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	418
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	2,011
10	Construct New Concrete Driveway per MAG Dtl 250-2	SF	169
28	Construct SRP 36" Irrigation Pipe	LF	194
29	Construct SRP Manhole	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	198

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet DW01 for Driveway Details.
3. See Sheet SL3 for Street Lighting Plan.
4. See Sheet WL04 for Waterline Plan & Profile.
5. See SRP Plans for SRP Irrigation.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
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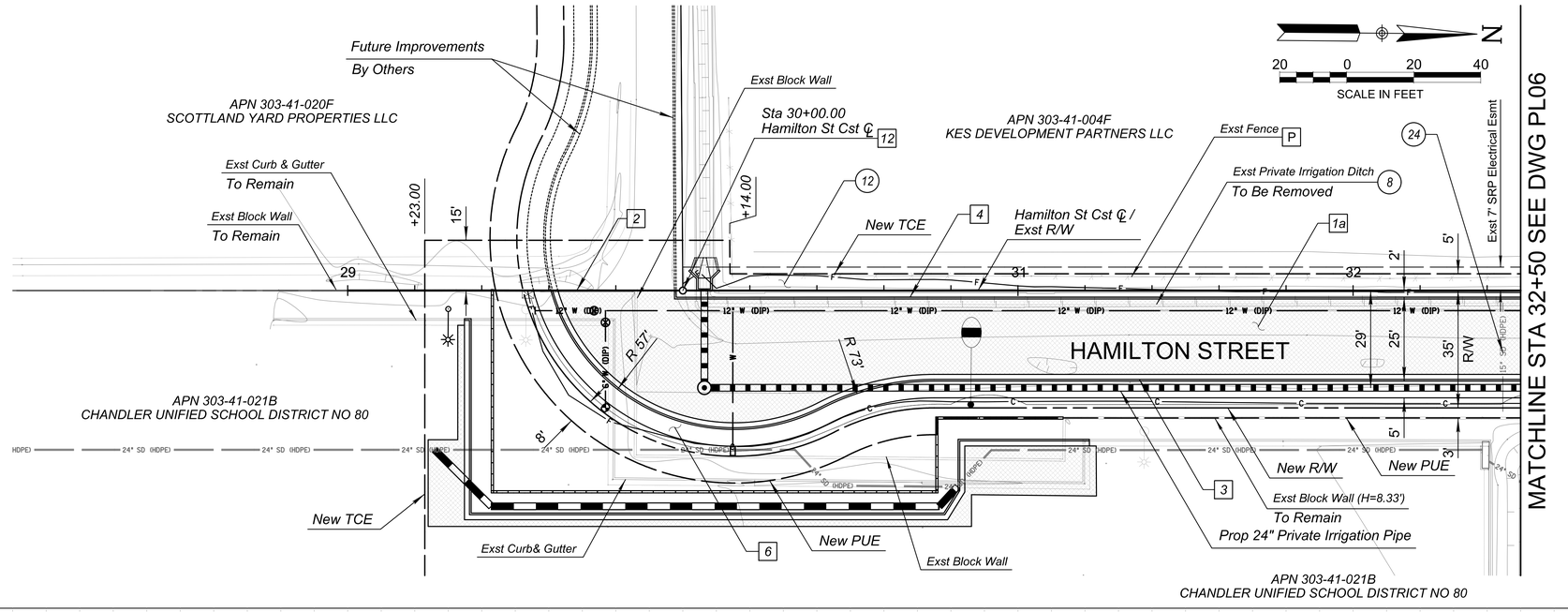
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CAROB DRIVE PLAN & PROFILE
STA 12+50 TO STA 15+22.75

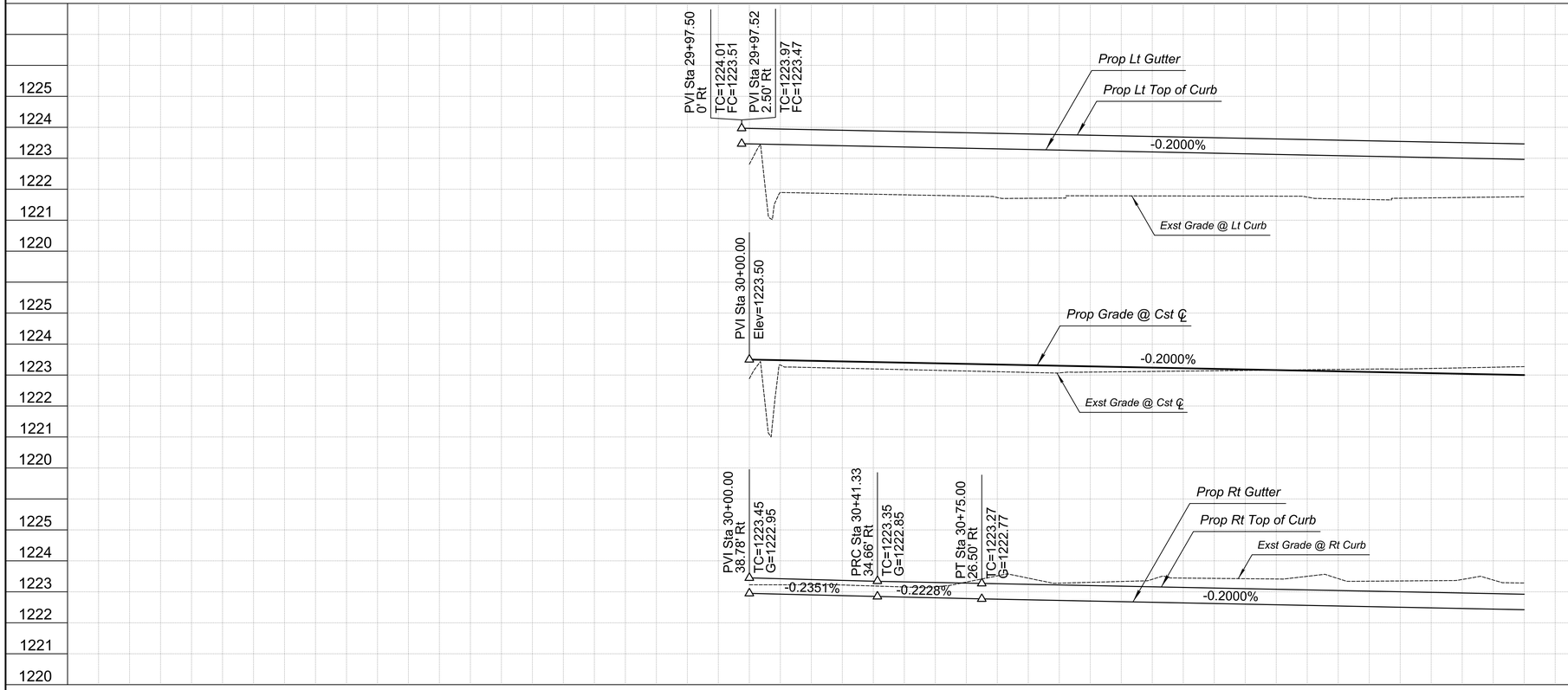
CITY PROJECT NO.
ST2007.401

DWG. NO.
PL04

13 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	797
2	Construct Thickened Pavement Edge per MAG Dtl 201, Type B	LF	35
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	310
4	Construct New Single Curb per MAG Dtl 222, Type 'A'	LF	255
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	1,573
12	Construct Survey Marker per MAG Dtl 120-1, Type B	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
8	Remove & Dispose Exst Private Irrigation Ditch	LF	248
12	Trim Existing Trees	LF	240
24	Remove & Dispose Exst 15" HDPE Storm Drain	LF	32

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PW01 for Block Wall Plan.
3. See Sheet SL2 for Street Lighting Plan.
4. See Sheet SL2 for Street Lighting Plan.
5. See Sheet PI01 for Private Irrigation Plan.
6. See Sheet WL05 for Waterline Plan and Profile.

M Match
P Protect
S Sawcut

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CITY OF CHANDLER
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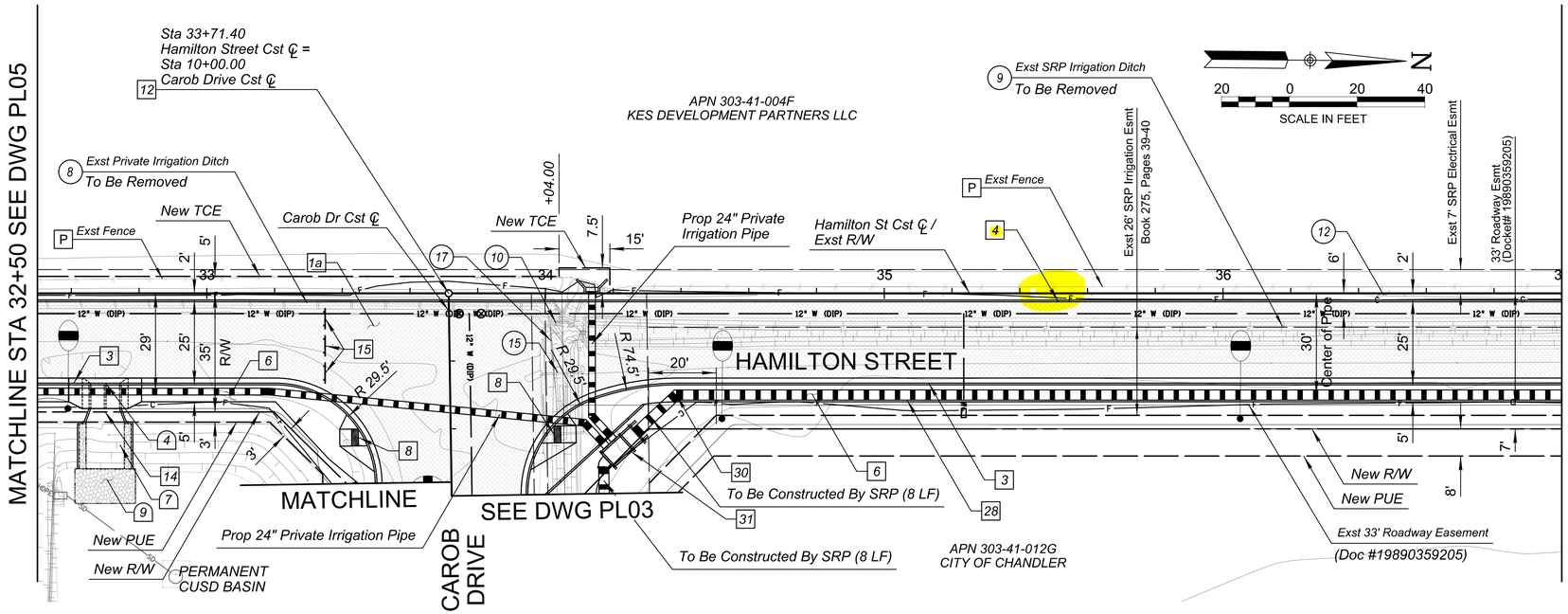
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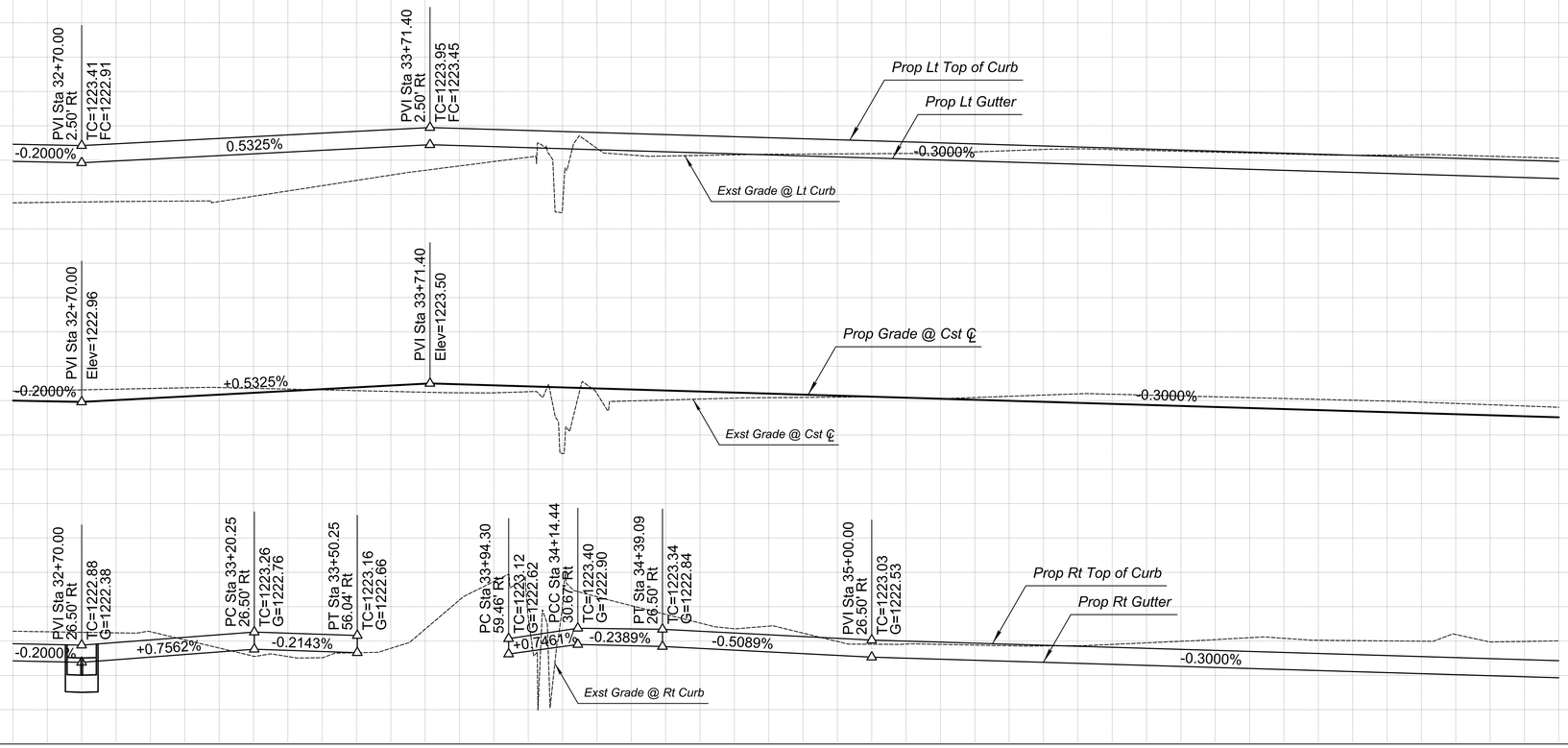
CITY PROJECT NO.
ST2007.401

DWG. NO.
PL05

14 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	1,331
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	441
4	Construct New Single Curb per MAG Dtl 222, Type 'A'	LF	450
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	2,268
8	Construct New Concrete Directional Curb Ramp per COC Dtl C-258 (Modified), and Align per COC Dtl C-249 See Sheet SK02	SF	176
12	Construct Survey Marker per MAG Dtl 120-1, Type B	EA	1
14	Remove & Reconstruct Exst Block Wall	SF	128
15	Construct Barricade per MAG Dtl 130, Type A	LF	18
28	Construct SRP 36" Irrigation Pipe	LF	269
30	Construct SRP Concrete Pipe Collar	EA	1
31	SRP Irrigation Structure - To Be Constructed By SRP		

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
4	Construct Concrete Scupper per COC Dtl C-500, 2 - 4' Curb Openings with Storm Drain Inlet Marker per COC Dtl C-508	EA	1
7	Construct Concrete Spillway per COC Dtl C-500, W=8.5'	LF	18
9	Dumped Riprap, D50=6", T=12" See Sheet DR01 for Gradation	CY	8

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
8	Remove & Dispose Exst Private Irrigation Ditch	LF	158
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	345
10	Remove & Dispose Exst SRP Irrigation Structure	EA	1
12	Trim Existing Trees	LF	450
15	Remove & Dispose Exst SRP Concrete Slab Bridge	SF	213
17	Remove Gate Posts & Gates	EA	1

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet SK02 for Staking Plan.
3. See Sheet SL2 for Street Lighting Plan.
4. See Sheet WL06 for Waterline Plan & Profile.
5. See Sheet PI01 & PI02 for Private Irrigation Plan.
5. See SRP Plans for SRP Irrigation.

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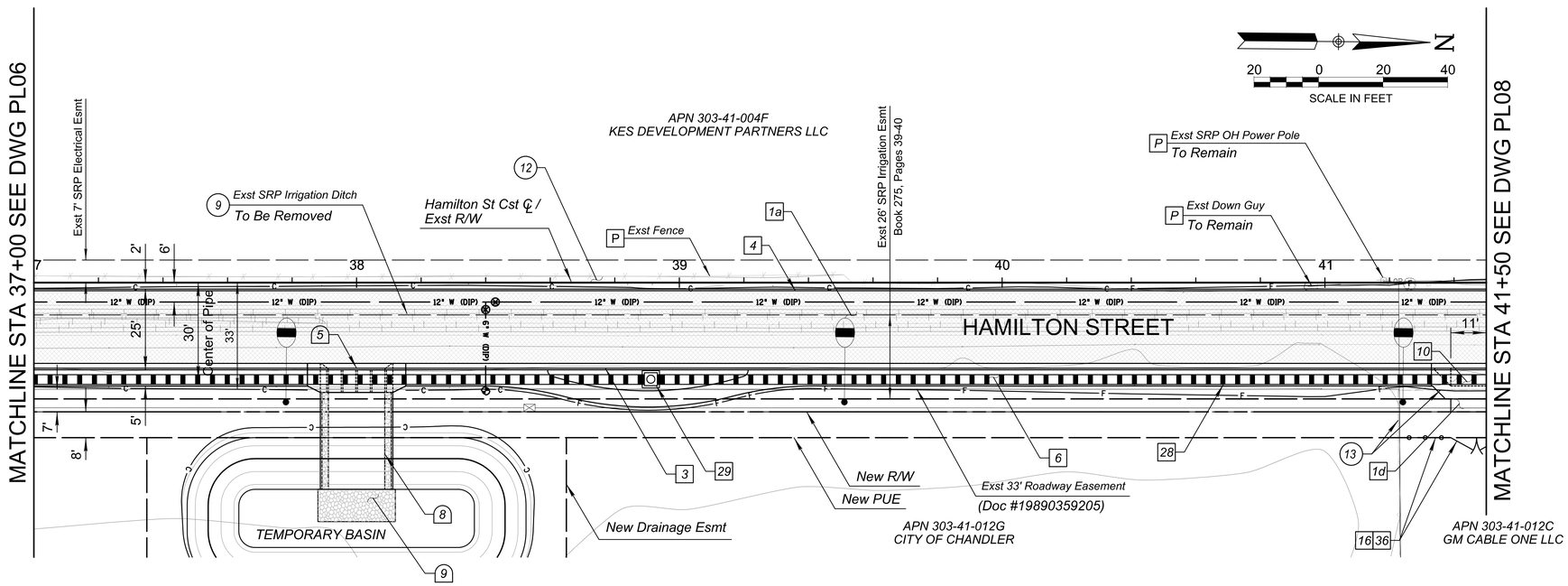
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON ST PLAN & PROFILE STA 32+50 TO STA 37+00

CITY PROJECT NO.
ST2007.401

DWG. NO.
PL06

15 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	1,125
1d	Construct New AC Pavement per Structural Section No 4	SY	5
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	450
4	Construct New Single Curb per MAG Dtl 222, Type 'A'	LF	450
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	2,079
10	Construct New Concrete Driveway per MAG Dtl 250-2	SF	112
16	Construct Pipe Rail Fence and Salvaged 16' Wide Double Gate	LF	27
28	Construct SRP 36" Irrigation Pipe	LF	414
29	Construct SRP Manhole	EA	1
36	Provide 6' High Privacy Mesh Screen on Relocated Fence or Temporary Posts During Construction	LF	52

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
5	Construct Concrete Scupper per COC Dtl C-500, 4 - 4' Curb Openings with Storm Drain Inlet Marker per COC Dtl C-508	EA	1
8	Construct Concrete Spillway per COC Dtl C-500, W=17.5'	LF	30
9	Dumped Riprap, D50=6", T=12" See Sheet DR01 for Gradation	CY	13

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	450
12	Trim Existing Trees	LF	450
13	Remove & Salvage Exst Pipe Rail Fence and Gate (16' Wide Double Gate)	LF	42

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet DR07 for Retention Basin Details.
3. See Sheet SL2 for Street Lighting Plan.
4. See Sheet WL07 for Waterline Plan & Profile.
5. See SRP Plans for SRP Irrigation.

M Match
P Protect
S Sawcut

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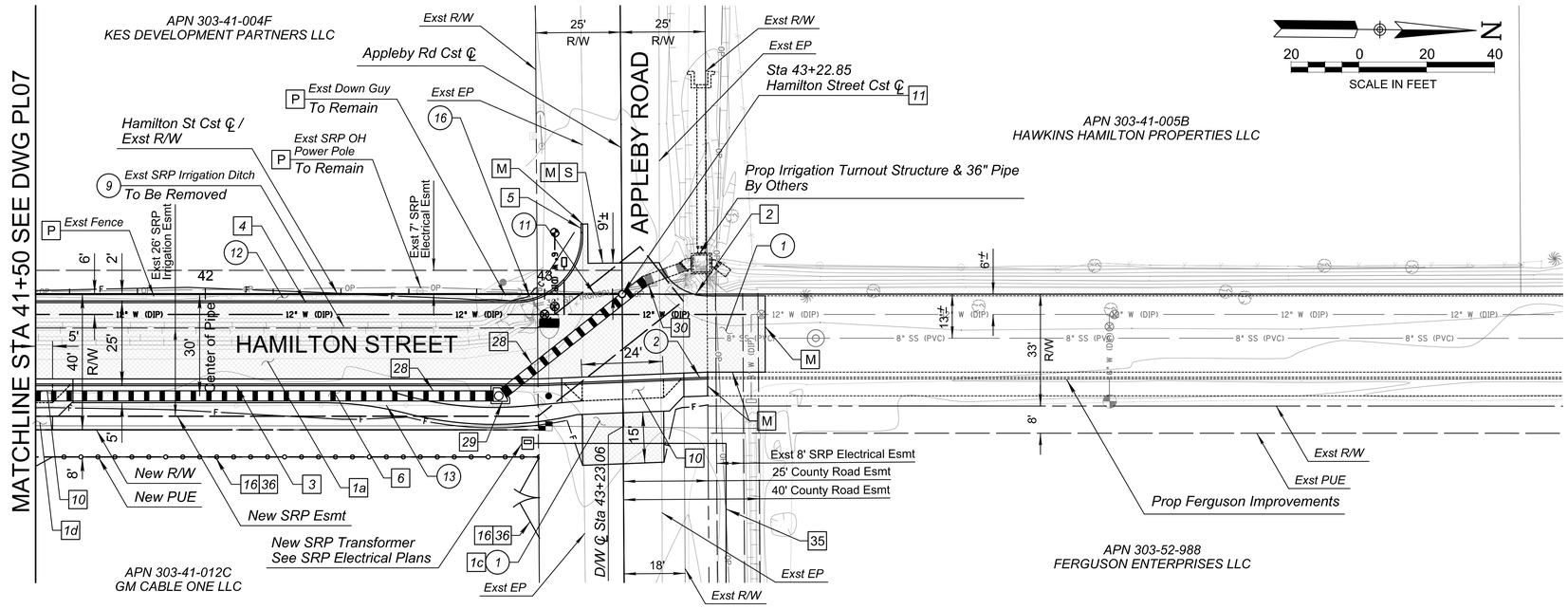
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON ST PLAN & PROFILE STA 37+00 TO STA 41+50

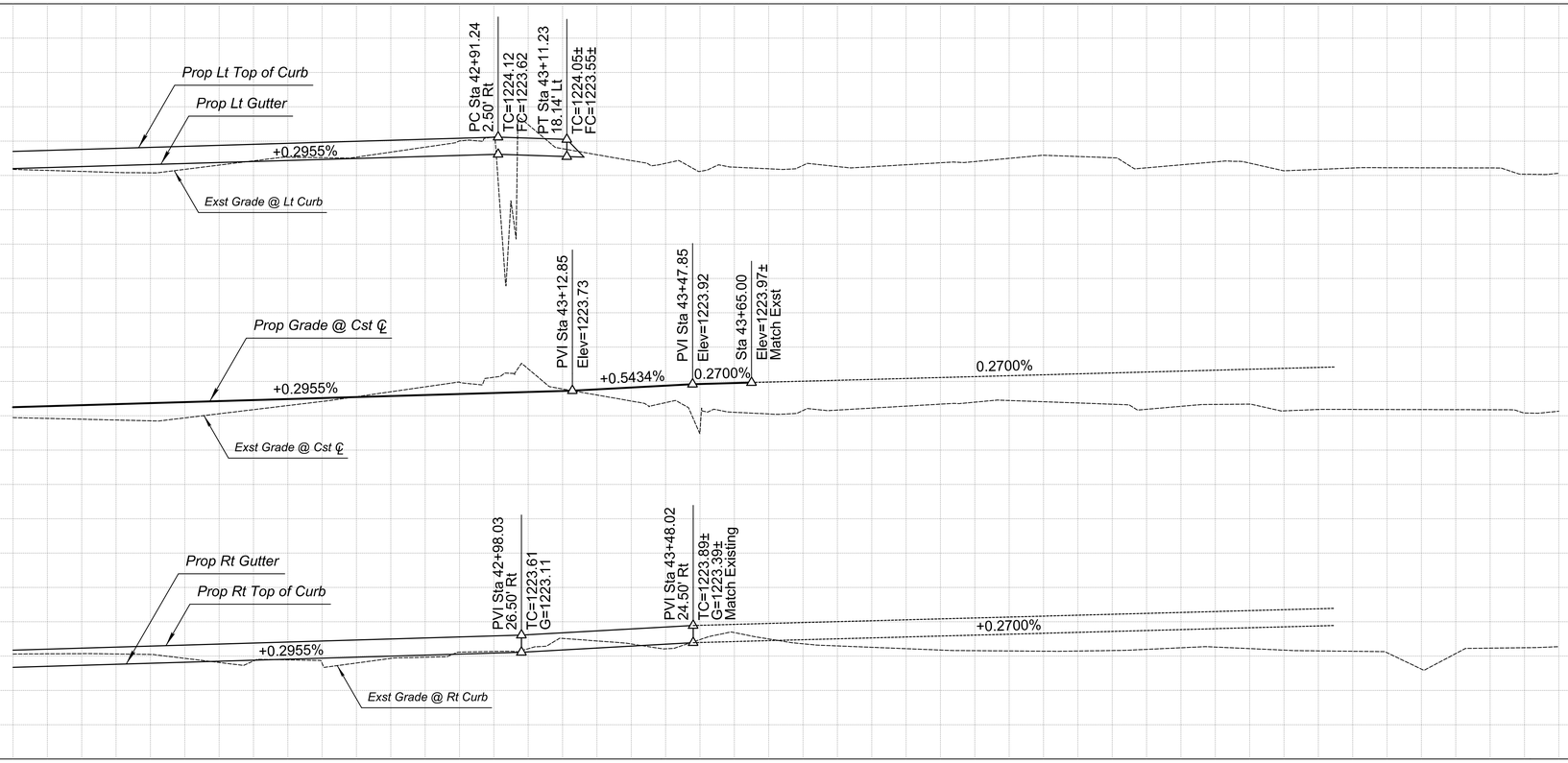
CITY PROJECT NO.
ST2007.401

DWG. NO.
PL07

16 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1a	Construct New AC Pavement per Structural Section No 1	SY	580
1c	Construct New AC Pavement per Structural Section No 3	SY	40
1d	Construct New AC Pavement per Structural Section No 4	SY	2
2	Construct Thickened Pavement Edge per MAG Dtl 201, Type B	LF	39
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	198
4	Construct New Single Curb per MAG Dtl 222, Type 'A'	LF	176
5	Construct New Single Curb Termination per MAG Dtl 222		
6	Construct New Concrete Sidewalk per MAG Dtl 230	SF	860
10	Construct New Concrete Driveway per MAG Dtl 250-2	SF	299
11	Construct Survey Marker per MAG Dtl 120-1, Type A	EA	1
16	Construct Pipe Rail Fence and Salvaged 24' Wide Double Gate	LF	172
28	Construct SRP 36" Irrigation Pipe	LF	188
29	Construct SRP Manhole	EA	1
30	Construct SRP Concrete Pipe Collar	EA	1
35	Construct 3-3" Conduit Per SRP Plans	LF	100
36	Provide 6' High Privacy Mesh Screen on Relocated Fence or Temporary Posts During Construction	LF	198

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
1	Sawcut, Remove & Dispose Exst AC Pavement	SY	231
2	Sawcut, Remove & Dispose Exst Curb and Gutter	LF	5
9	Remove & Dispose Exst SRP Irrigation Ditch	LF	150
11	Remove & Dispose Exst SRP Irrigation Pipe	LF	46
12	Trim Existing Trees	LF	150
13	Remove & Salvage Exst Pipe Rail Fence and Gate (24' Wide Double Gate)	LF	187
16	Remove & Dispose Exst Conc Headwall & Object Markers	EA	1

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet SK03 for Staking Plan.
3. See Sheet DW01 for Driveway Details.
4. See Sheet SL2 for Street Lighting Plan.
5. See Sheet SL2 for Street Lighting Plan.
6. See SRP Plans for SRP Irrigation.

M Match
P Protect
S Sawcut

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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON ST PLAN & PROFILE
STA 41+50 TO STA 43+65.00

CITY PROJECT NO.
ST2007.401

DWG. NO.
PL08

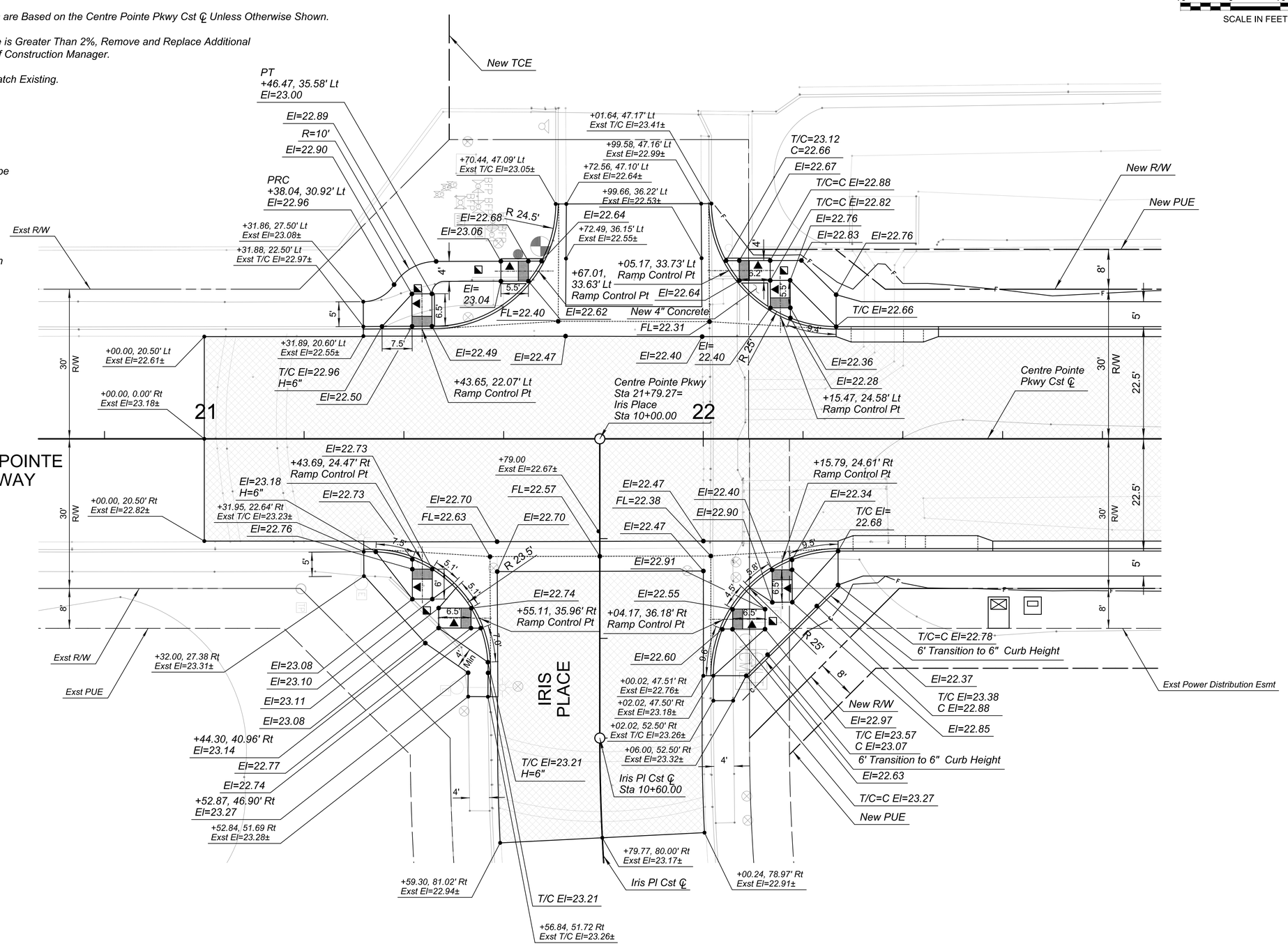
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NOTES:
1. To Obtain Actual Elevations, Add 1,200 to the Elevations Shown on this Detail.
2. See COC Dtl C-257 and C-258 for Additional Notes and Dimensions.
3. Stationing and Offsets are Based on the Centre Pointe Pkwy Cst ℄ Unless Otherwise Shown.
4. If Existing Cross-slope is Greater Than 2%, Remove and Replace Additional Panels Per Direction of Construction Manager.
5. Crown Transition to Match Existing.

▲ 12:1 Max Slope
◪ 1% Min, 2% Max Slope
T/C=Top of Curb
H=Curb Height
FL=Flow Line
C=Concrete Elevation

N
10 0 10 20
SCALE IN FEET



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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
INTERSECTION STAKING PLAN CENTRE POINTE AND IRIS

CITY PROJECT NO.
ST2007.401

DWG. NO.
SK01

18 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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NOTES:

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2. See COC Dtl C-258 for Additional Notes and Dimensions.
3. Stationing and Offsets are Based on the Carob Dr Cst ℄ Unless Otherwise Shown.
4. If Existing Cross-slope is Greater Than 2%, Remove and Replace Additional Panels Per Direction of Construction Manager.
5. Crown Transition to Match Existing.
6. Contractor May Adjust Curb Height Behind Ramps to Match Elevations of Existing Ground.

▲ 12:1 Max Slope

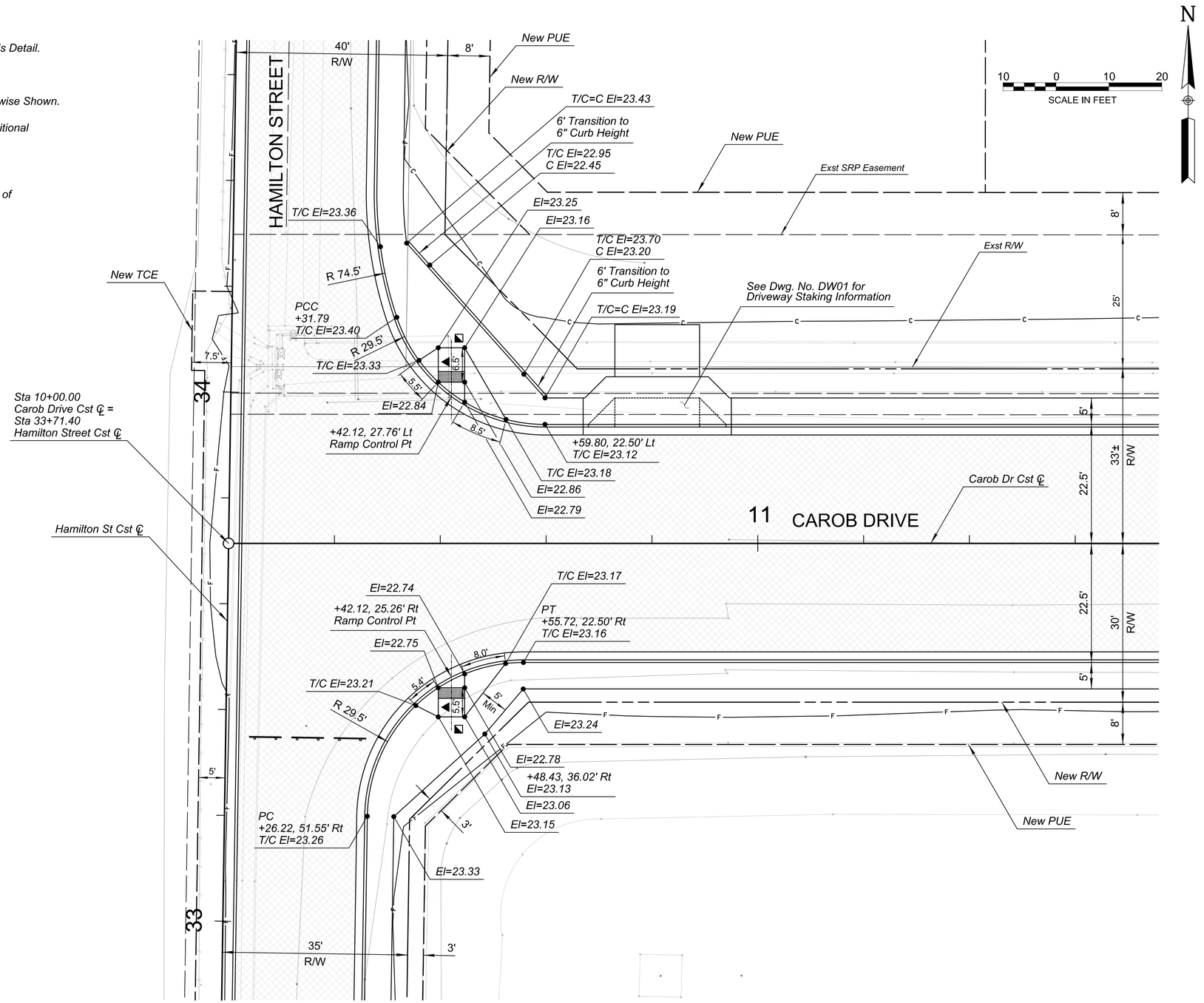
◹ 1% Min, 2% Max Slope

T/C=Top of Curb

H=Curb Height

FL=Flow Line

C=Concrete Elevation



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HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

INTERSECTION STAKING PLAN
CAROB DR AND HAMILTON ST

CITY PROJECT NO.
ST2007.401

DWG. NO.
SK02

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SCALE IN FEET

APPLEBY ROAD

HAMILTON STREET

Exst R/W

25' R/W

Exst EP

Appleby Rd Cst ℄

Hamilton St Cst C / Exst R/W

L

PC +91.24 T/C Elev=1224.12

PT +10.73 T/C Elev=1224.05

R 19.5'

R 15'

Sta 43+22.85 Hamilton Street Cst ℄

+12.71 Exst Elev=1223.49±

+10.71 Exst Elev=1223.53±

+12.73 Exst Elev= 1223.51±

+12.79 Exst Elev= 1223.63±

+33.81 Exst Elev= 1223.14±

+47.86 Exst Elev=1223.92± Match Ferguson Improvements

42

43

2'

9.5'

40' R/W

25'

5'

8'

33' R/W

24'

15'

16'

Sta 43+65.00 Sawcut and Match Ferguson Improvements

Exst Elev=1223.47± Match Ferguson Improvements

Exst T/C Elev=1223.89± Match Ferguson Improvements

Exst Elev=1223.93± Match Ferguson Improvements

Exst PUE

+39.00 Elev=1222.72

+33.00 Elev=1222.70

+33.00 T/C Elev=1223.12

+55.00 Elev=1223.24

+55.00 Elev=1222.80

+61.00 Elev=1222.78

+61.00 T/C Elev=1223.20

+34.00 T/C Elev=1223.12

+33.34 Elev=1223.20

+37.34 Elev=1223.23

+39.00 Elev=1223.16

+60.00 T/C Elev=1223.20

+60.66 Elev=1223.28

+56.66 Elev=1223.31

New R/W

New PUE

See Dwg. No. DW01 for Staking Information

Exst EP

Exst R/W

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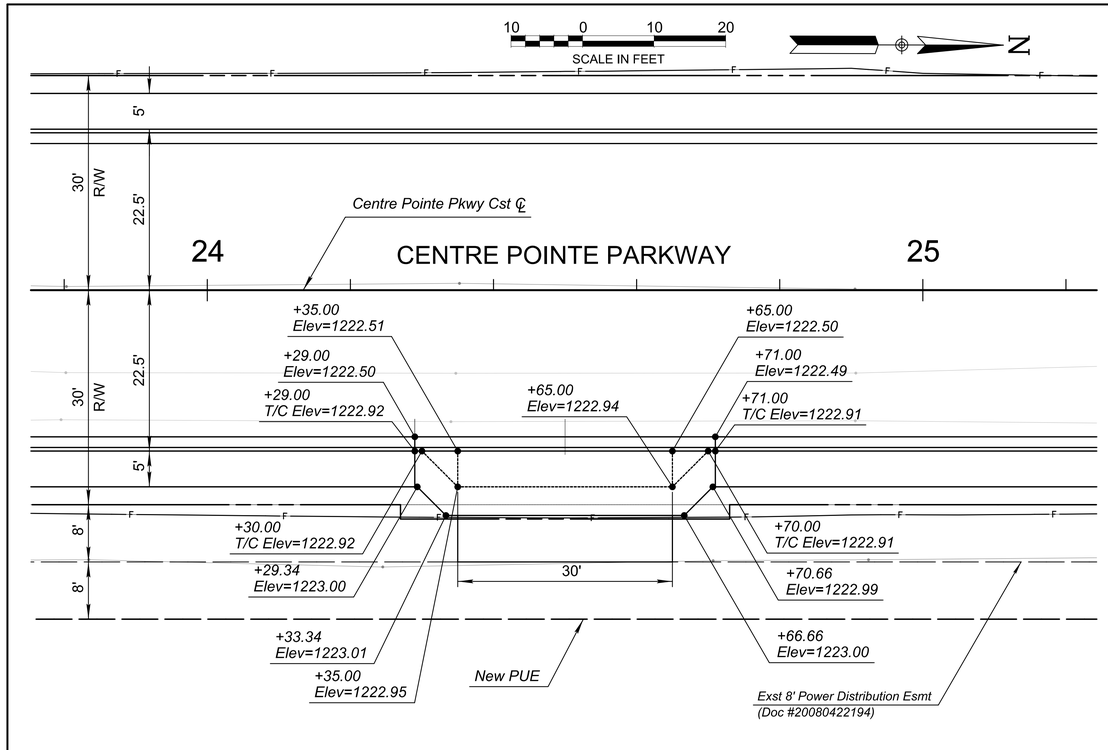
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
INTERSECTION STAKING PLAN
HAMILTON AND APPLEBY

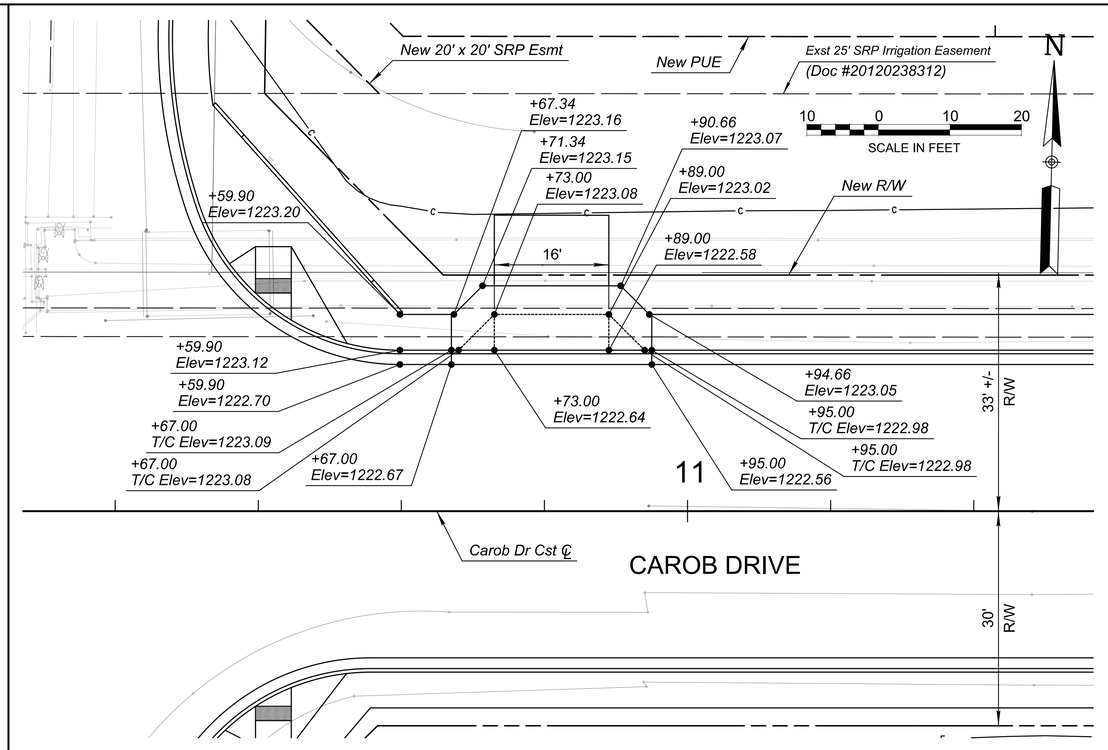
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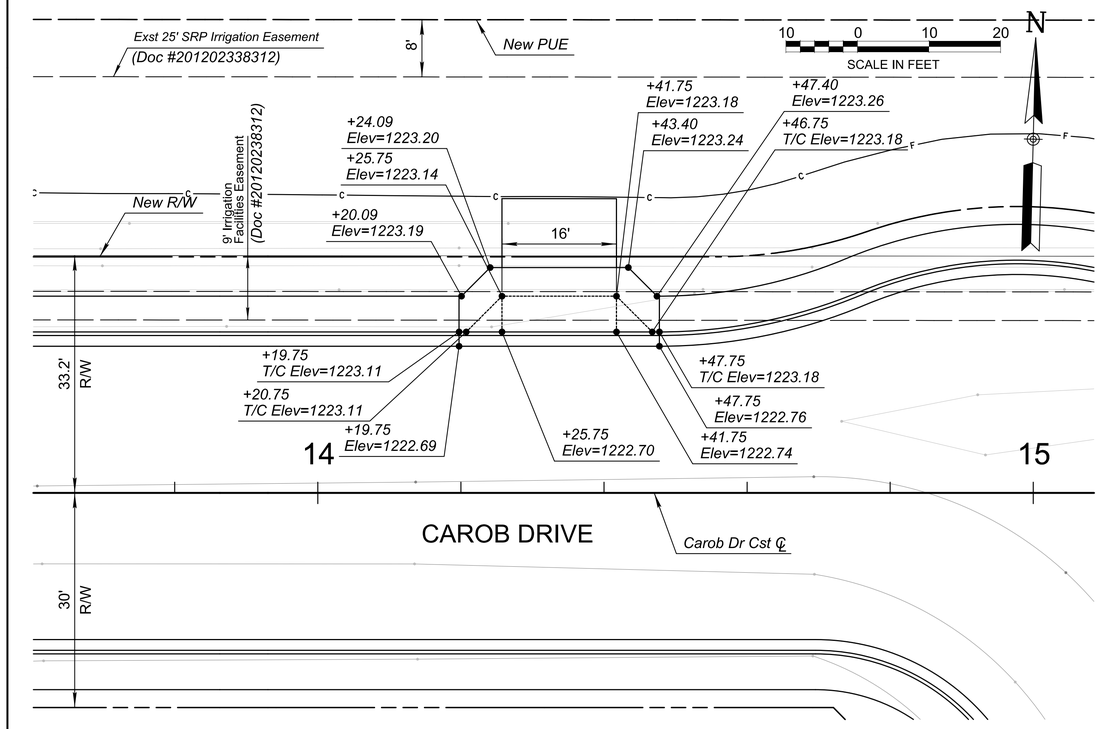
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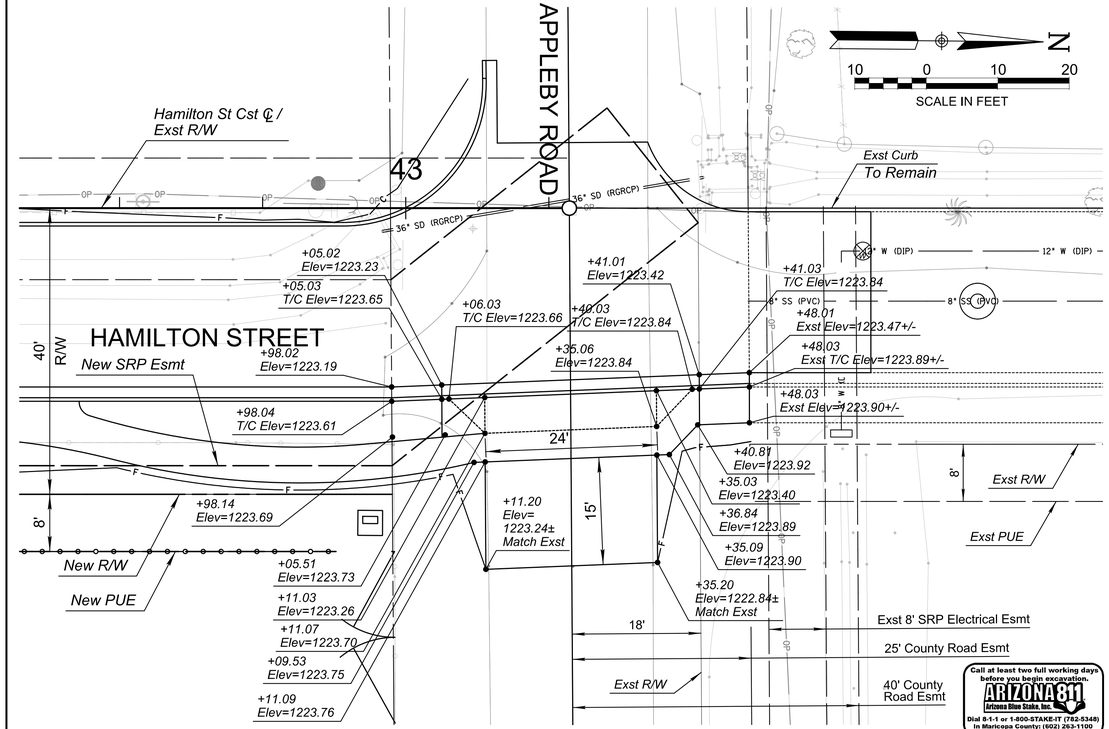
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Phoenix, Arizona 85012

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KEVIN R. THOMAS
Date Signed 10/30/23
ARIZONA U.S.A.
Expires 06/30/25

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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
DRIVEWAY DETAILS

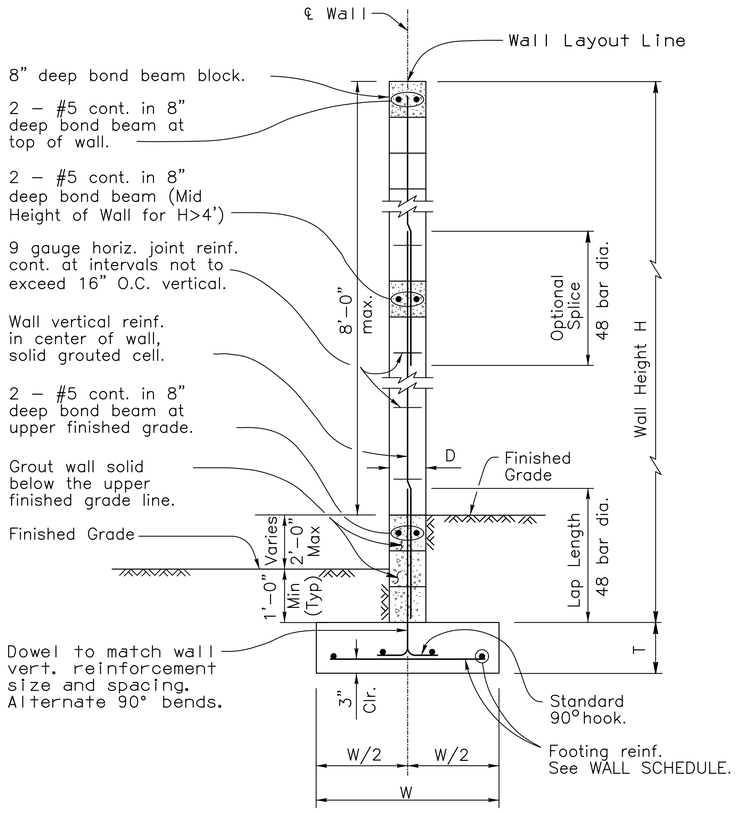
CITY PROJECT NO.
ST2007.401

DWG. NO.
DW01

21 OF 89

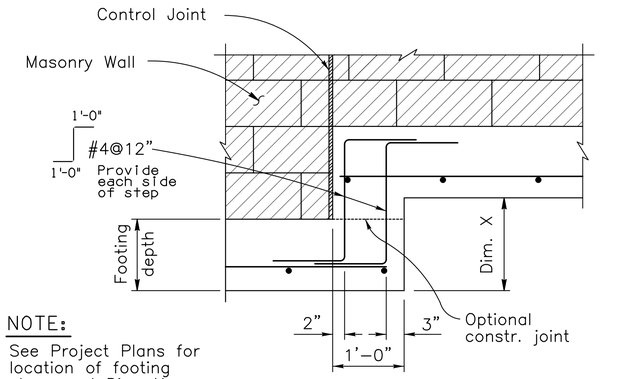
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TYPICAL WALL SECTION

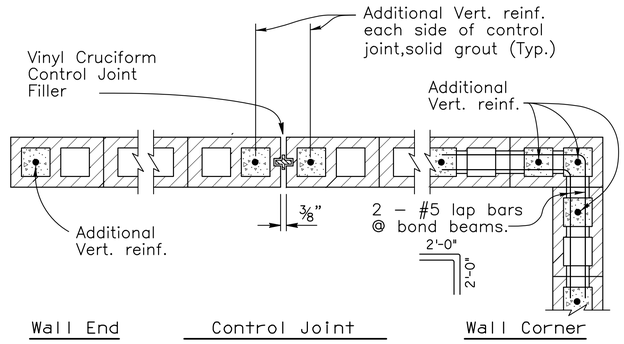
(For Wall Height 6'–0" to 9'–11")



NOTE:

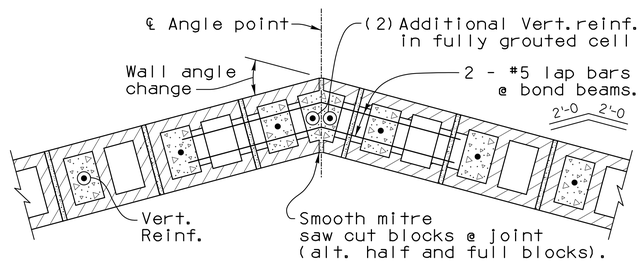
See Project Plans for location of footing steps and Dim. X.

FOOTING STEP DETAIL

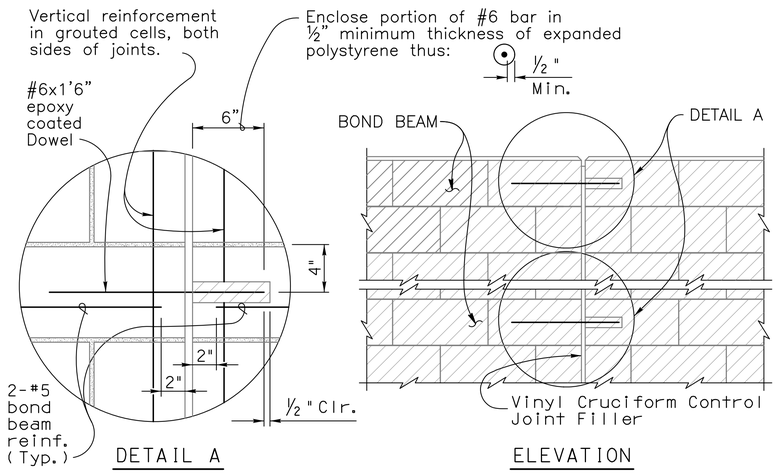


Wall End | Control Joint (Max. spacing 24'-0) | Wall Corner

WALL DETAILS AT JOINTS AND ENDS



SECTION AT WALL ANGLE POINT



DETAIL A | ELEVATION

TYPICAL BOND BEAM DETAIL AT CONTROL JOINT

(For bond beams above the upper Finished Grade Line)

WALL SCHEDULE							
Wall Height H	Wall Thick D**	Ftg. Depth T	Ftg. Width W	Reinforcing***			Factored Average Soil Bearing Pressure (psf)
				Wall	Footing		
				Vert.	Bottom Trans.	Bottom Long.	
6'-0 to 7'-11	8"	10"	2'-6	#5@24"	#5@24"	4-#4	1,300
8'-0 to 9'-11	8"	10"	3'-0	#5@24"	#5@16"	4-#4	1,400

** Nominal Dimension, *** Additional Reinf. required at Control Joints.

GENERAL NOTES:

Construction Specification – Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition. ACI 530.1, Specifications for Masonry Structures.

Design Specifications – AASHTO LRFD Bridge Design Specifications, 6th Edition 2012.

Wind Velocity 80 MPH, Exposure C.
Wind pressure 18.0 psf for wall height under 12'–0".
Wind pressure 25.0 psf for wall height over 12'–0".

Special Inspection is required for all masonry wall construction. Vertical Cells containing reinforcements shall be grouted solid full height. Bond Beams with reinforcements shall be grouted solid full length.

All Concrete shall be Class "S" (f'c = 3,000 psi).

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60 (fy = 60,000 psi).

All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out–to–out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Compact backfill for footing and wall base minimum 100 percent of ASTM D698 maximum dry density.

See Project Plans for wall layout, top of footing and finished grade elevations, footing step and wall joint locations. Height of wall may vary +/– 2 inches. Control joints shall occur at intervals not to exceed 24'–0". See Project Plans for wall surface treatment and type of block.

Pay item is measured as wall height H times length of wall, and pay item includes all labor and materials for excavation, backfill, concrete footing and masonry wall with reinforcements.

Dimensions shall not be scaled from drawings.

Materials Notes:

Masonry: f'm = 1500 psi, ASTM C90, Medium or Normal weight, Running Bond, SLUMP BLOCK unless noted otherwise.

Mortar: ASTM C270, Type S, Cube Strength 1800 psi, ASTM C91 cement.

Grout: ASTM C476, Type Coarse, Cube strength 2000 psi.

Reinforcing Steel: ASTM A615, Grade 60.

Joint Reinforcing: 9 Gauge Ladder or Truss type, Standard weight, fy=33,000 psi, ASTM A82 Wire.

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — 50900 KEVIN R. THOMAS — Date Signed 10/3/23 — ARIZONA U.S.A. — Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
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DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

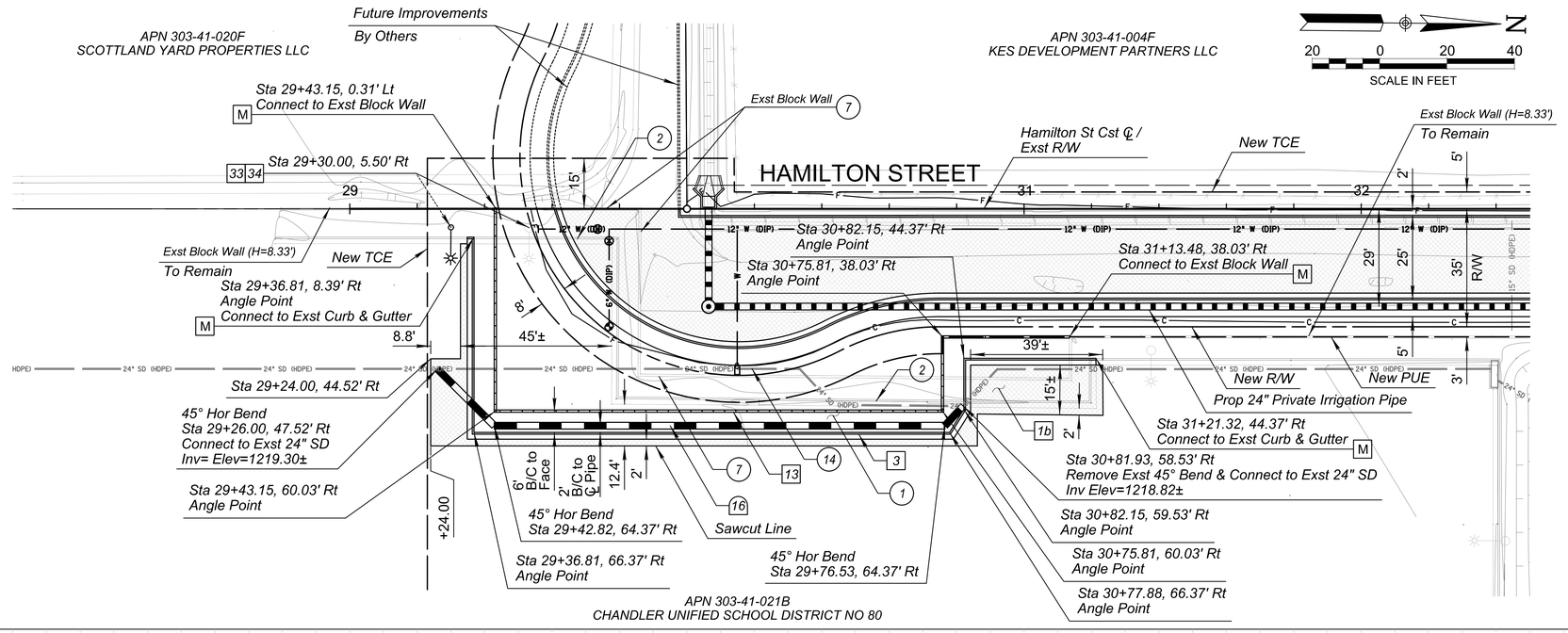
HAMILTON STREET / CUSD BLOCK WALL DETAIL

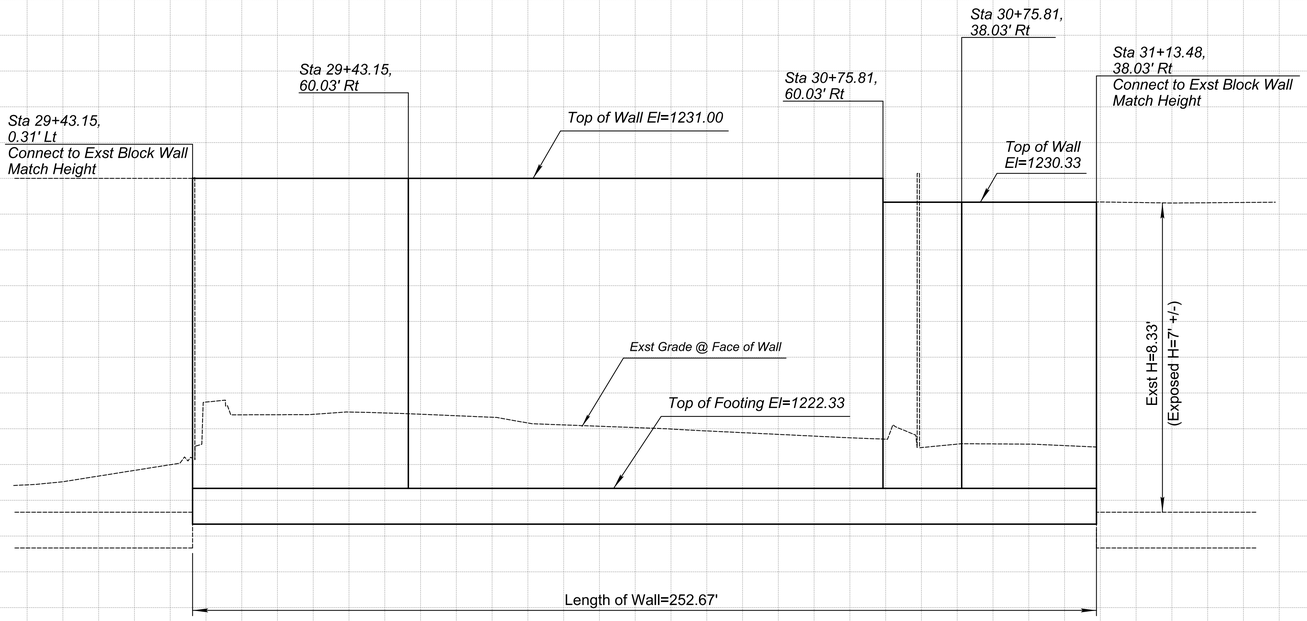
CITY PROJECT NO. ST2007.401

DWG. NO. PWD01

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
1b	Construct New AC Pavement per Structural Section No 2	SY	140
3	Construct New Vertical Curb & Gutter per MAG Dtl 220 Type 'A'	LF	262
13	Construct New CMU Block Wall per Details on Sheet PWD1	SF	2,150
33	Relocate Exst Street Light Pole to New Foundation	EA	1
34	New Street Light Foundation (Match Existing)	EA	1

DRAINAGE NOTES

NO	DESCRIPTION	UNIT	QTY
16	24" HDPE Storm Drain Pipe	LF	166

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
1	Sawcut, Remove & Dispose Exst AC Pavement	SY	480
2	Sawcut, Remove & Dispose Exst Curb and Gutter	LF	247
7	Remove & Dispose Exst CMU Block Wall and Footing	SF	2,003
14	Remove & Salvage Exst 24" HDPE Storm Drain, Including 45° Bends	LF	161

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL05 for Roadway Plan and Profile.
3. See Sheet PI01 for Private Irrigation Plan.
4. See Sheet SL2 for Street Lighting Plan.
5. See Sheet WL05 for Waterline Plan and Profile.

M Match
P Protect
S Sawcut

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Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/06/23
ARIZONA U.S.A.
Expires 06/30/25

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SCALE (V):	1"=2'
DESIGNED BY:	KRT
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DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON STREET / CUSD
BLOCK WALL PLAN & PROFILE

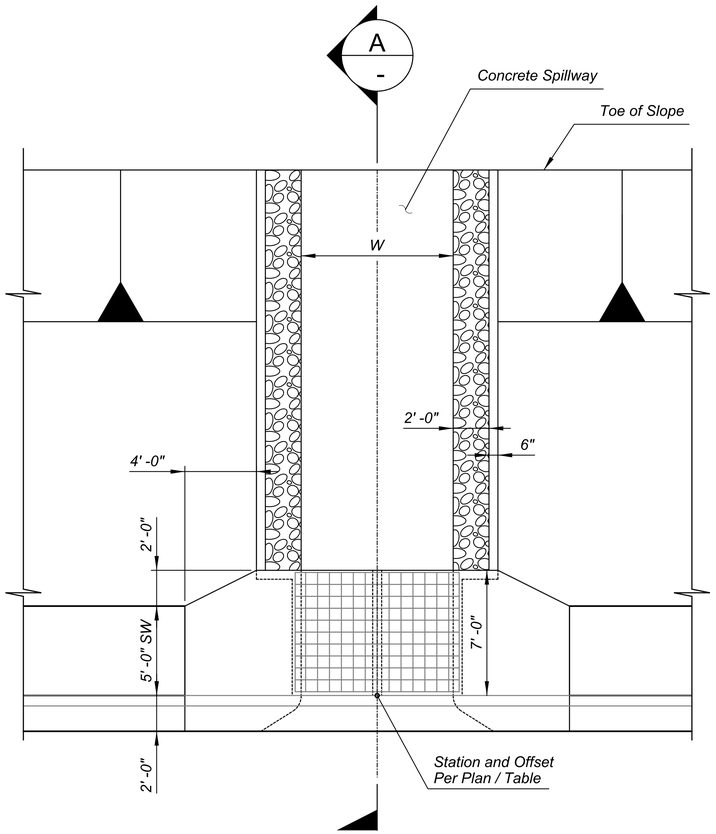
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PW01

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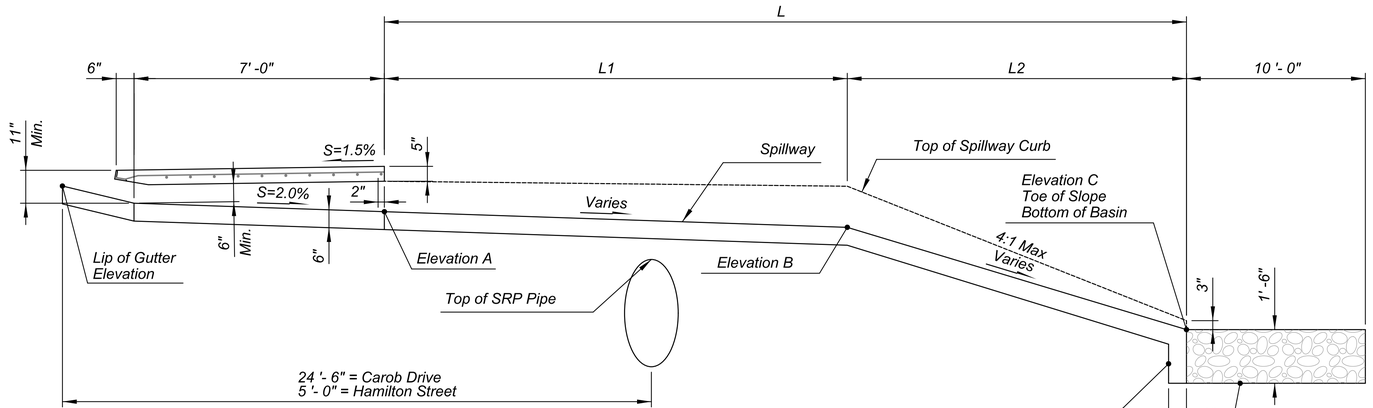
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SCUPPER PLAN

Scale: ¼"=1'-0"

Dumped Riprap Gradation Table	
% Passing	D_{50}= 6"
100-90	12"
85-70	9"
50-30	6"
15-5	4"
5-0	2"



SECTION A -

Scale: ½"=1'-0"

Street	Station/Offset	Lip of Gutter Elevation	Elevation A	Length L_1 (FT)	Elevation B	Length L_2 (FT)	Elevation C	Length L (FT)	Width W (FT)	Angle	No. Cells	Top of SRP Pipe Elevation
Carob Drive	*12+00.00, 22.50' Lt*	*1222.14*	*1221.75*	*34.50*	*1221.41*	*18.25*	*1218.06*	*44.75*	*8.50*	*90°*	*2*	*1220.40*
Hamilton Street	*38+00.00, 27.00' Rt*	*1221.71*	*1221.32*	*10.75*	*1221.11*	*19.25*	*1217.63*	*30.00*	*17.50*	*90°*	*4*	*1220.10*

NOTES:

1. *See COC Dtl C-500 for General Notes and Additional Information*
2. *Width, W, includes a 6" wall for every 4' of opening required*

D1 COC DTL C-500
CONCRETE SCUPPER

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77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — Certificate No. 50900 — KEVIN R. THOMAS — Date Signed 10/3/2023 — ARIZONA U.S.A. — Expires 06/30/25

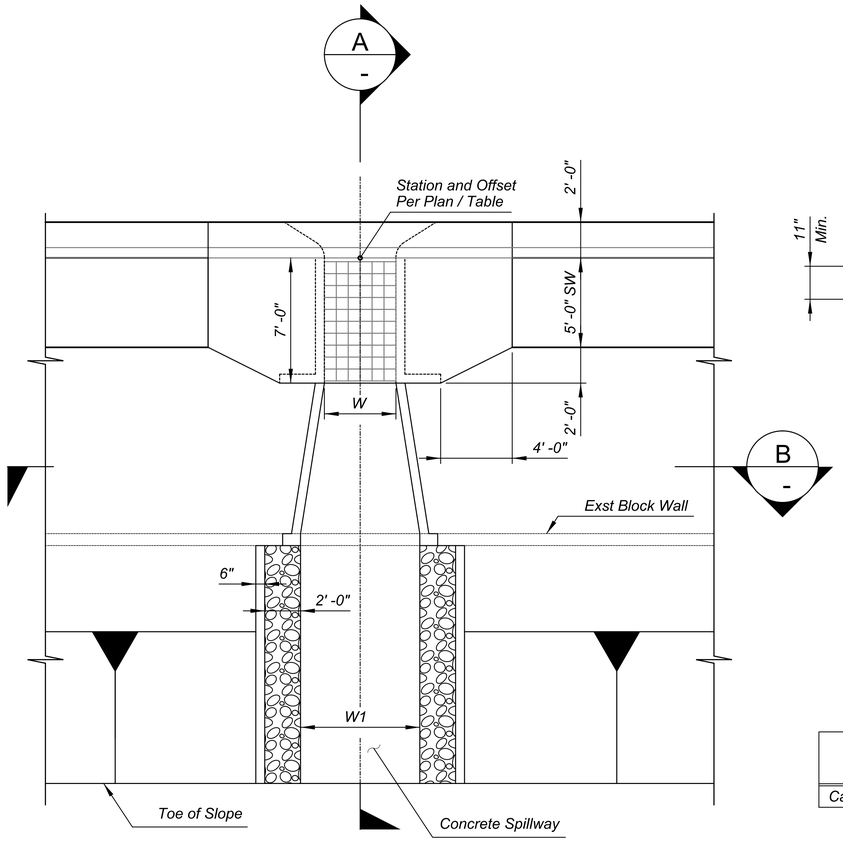
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HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SCUPPER DETAIL SHEET

CITY PROJECT NO.
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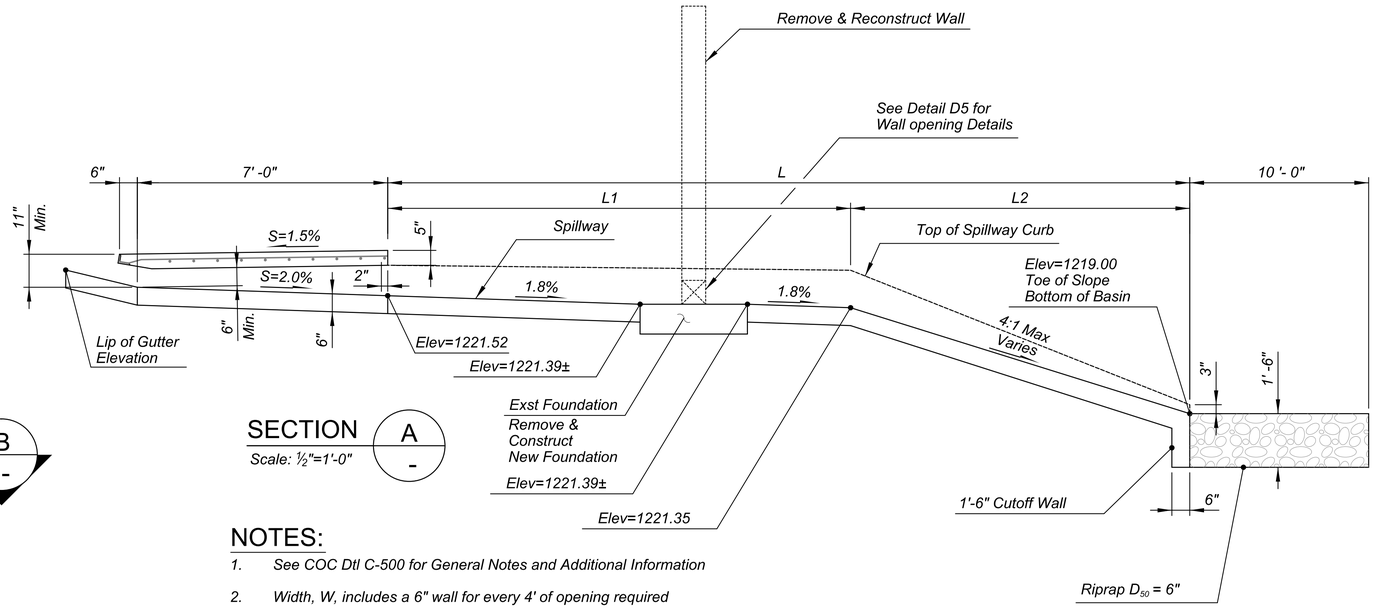
DWG. NO.
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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



SCUPPER PLAN

Scale: ¼"=1'-0"



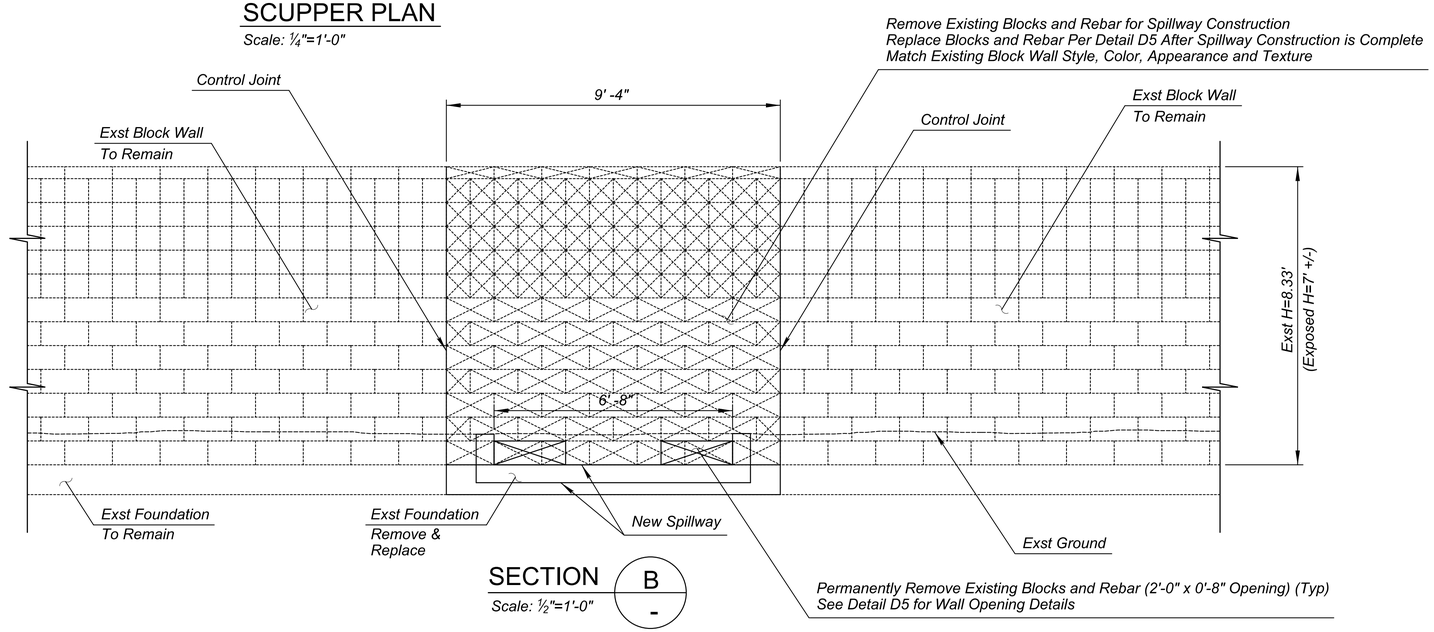
SECTION A

Scale: ½"=1'-0"

NOTES:

1. See COC Dtl C-500 for General Notes and Additional Information
2. Width, W, includes a 6" wall for every 4' of opening required
3. See Detail D1 for Dumped Riprap Gradation.
4. Walls to be constructed in accordance with Dwg. No. PWD01 for a design height 'H' as shown. Actual wall heights will vary and are to be built to elevations specified. See Dwg. No. DR05 for wall details.

Street	Station/Offset	Lip of Gutter Elevation	Length L_1 (FT)	Length L_2 (FT)	Length L (FT)	Width W (FT)	Width W1 (FT)	Angle	No. Cells
Carob Drive	12+00.00, 22.50' Rt	1222.14	12.10	9.65	21.75	4.00	6.67	90°	1



SECTION B

Scale: ½"=1'-0"

D2 COC DTL C-500

CONCRETE SCUPPER
THROUGH BLOCK WALL
CAROB DRIVE

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Arizona Blue Stake, Inc.
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77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/3/23
ARIZONA U.S.A.
Expires 06/30/25

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SCALE (V):	N/A	DRAWN BY:	TV
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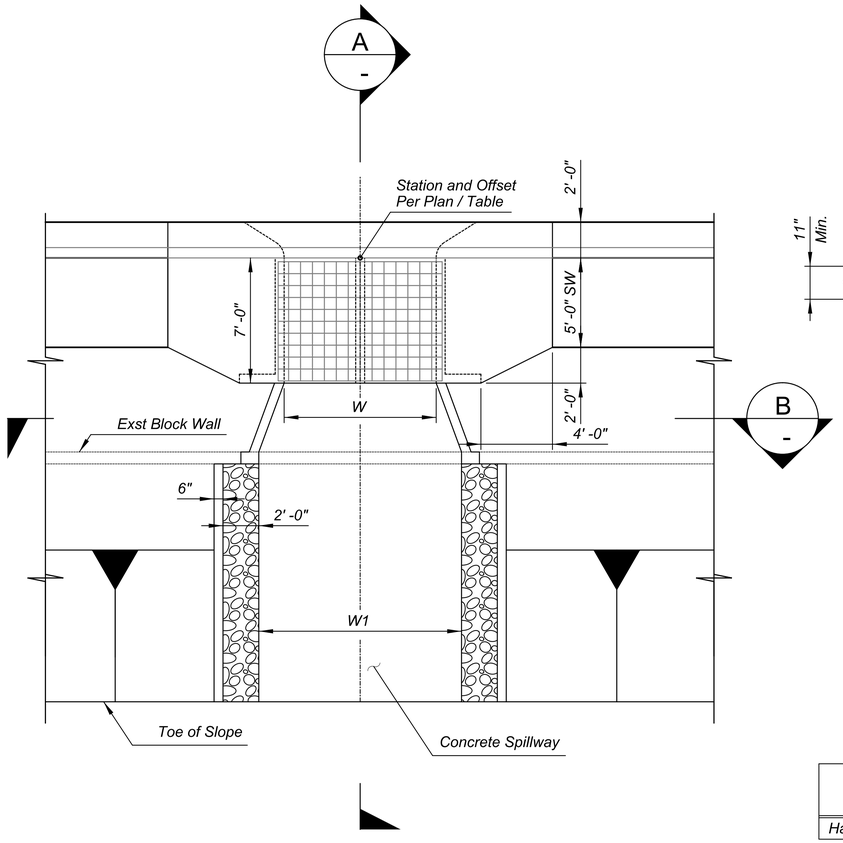
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SCUPPER DETAIL SHEET

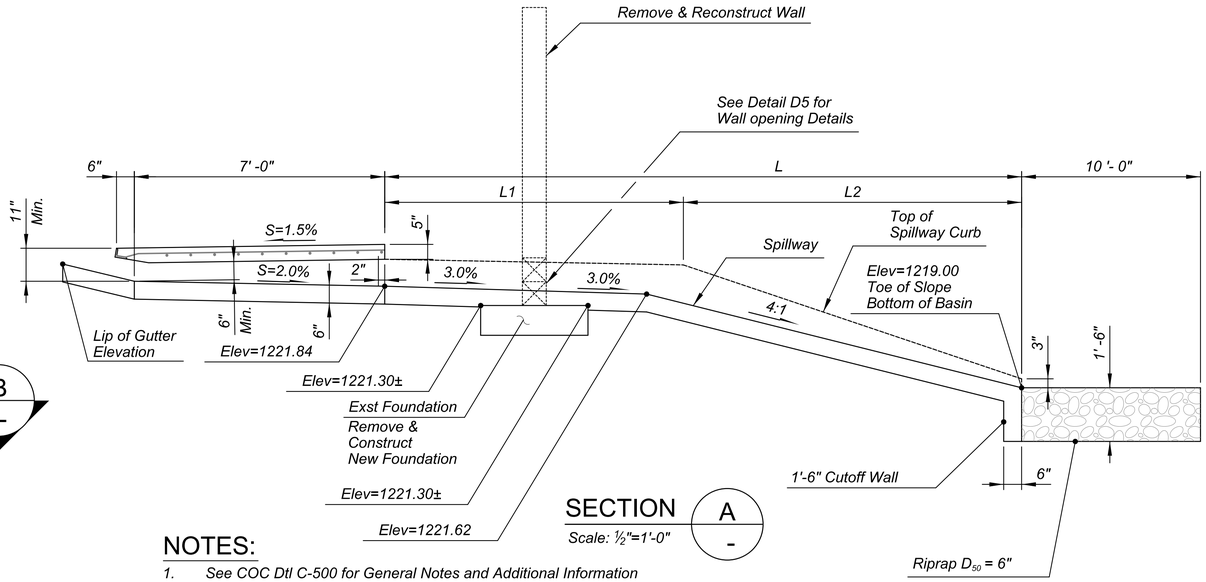
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ST2007.401

DWG. NO.
DR02

25 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





SECTION A
Scale: ½"=1'-0"

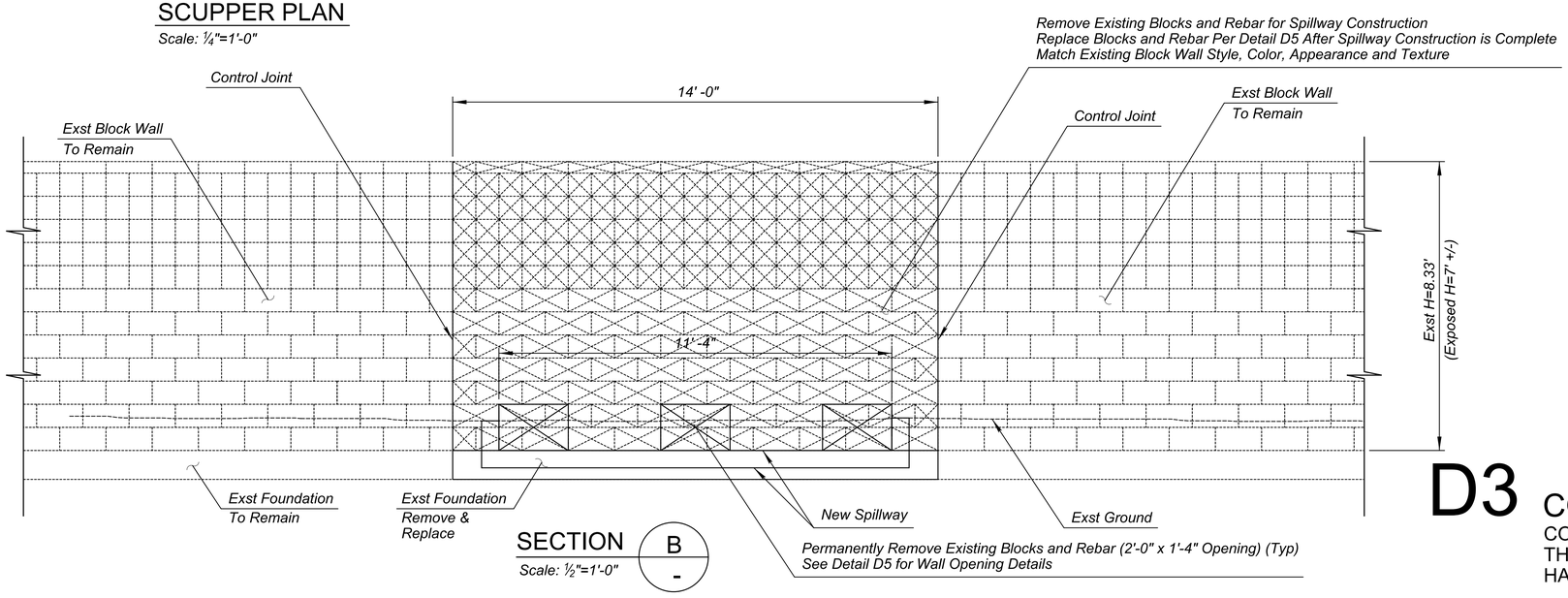
NOTES:

1. See COC Dtl C-500 for General Notes and Additional Information
2. Width, W, includes a 6" wall for every 4' of opening required
3. See Detail D1 for Dumped Riprap Gradation.
4. Walls to be constructed in accordance with Dwg. No. PWD01 for a design height 'H' as shown. Actual wall heights will vary and are to be built to elevations specified. See Dwg. No. DR05 for wall details.

Street	Station/Offset	Lip of Gutter Elevation	Length L_1 (FT)	Length L_2 (FT)	Length L (FT)	Width W (FT)	Width W1 (FT)	Angle	No. Cells
Hamilton Street	32+70.00, 27.00' Rt	1222.46	8.50	9.50	18.00	8.50	11.33	90°	2

SCUPPER PLAN

Scale: ¼"=1'-0"



SECTION B
Scale: ½"=1'-0"

D3

COC DTL C-500

CONCRETE SCUPPER
THROUGH BLOCK WALL
HAMILTON STREET

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REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/30/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A	DESIGNED BY:	KRT
SCALE (V):	N/A	DRAWN BY:	TV
		CHECKED BY:	RPW
		DATE:	10/2023

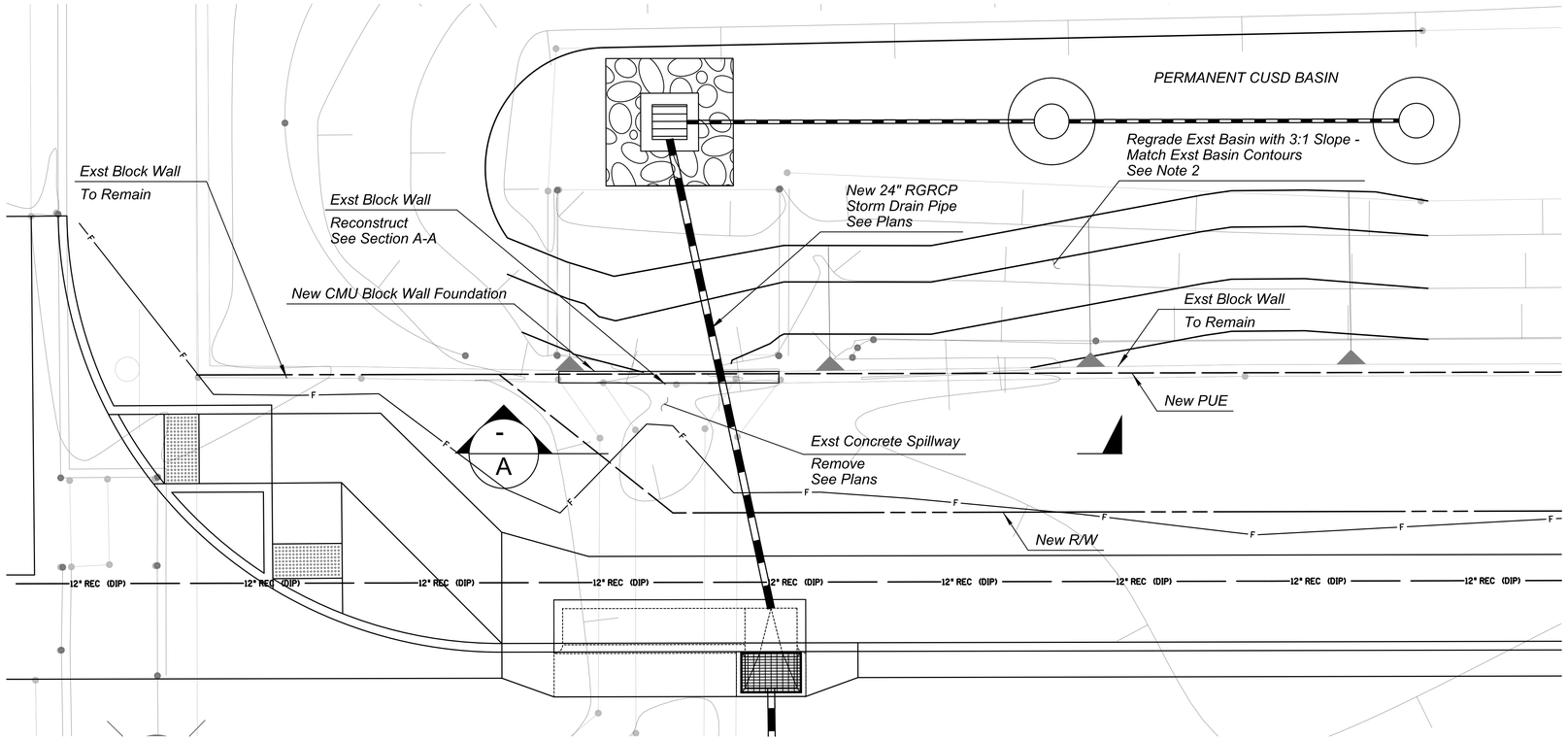
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SCUPPER DETAIL SHEET

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ST2007.401

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DR03

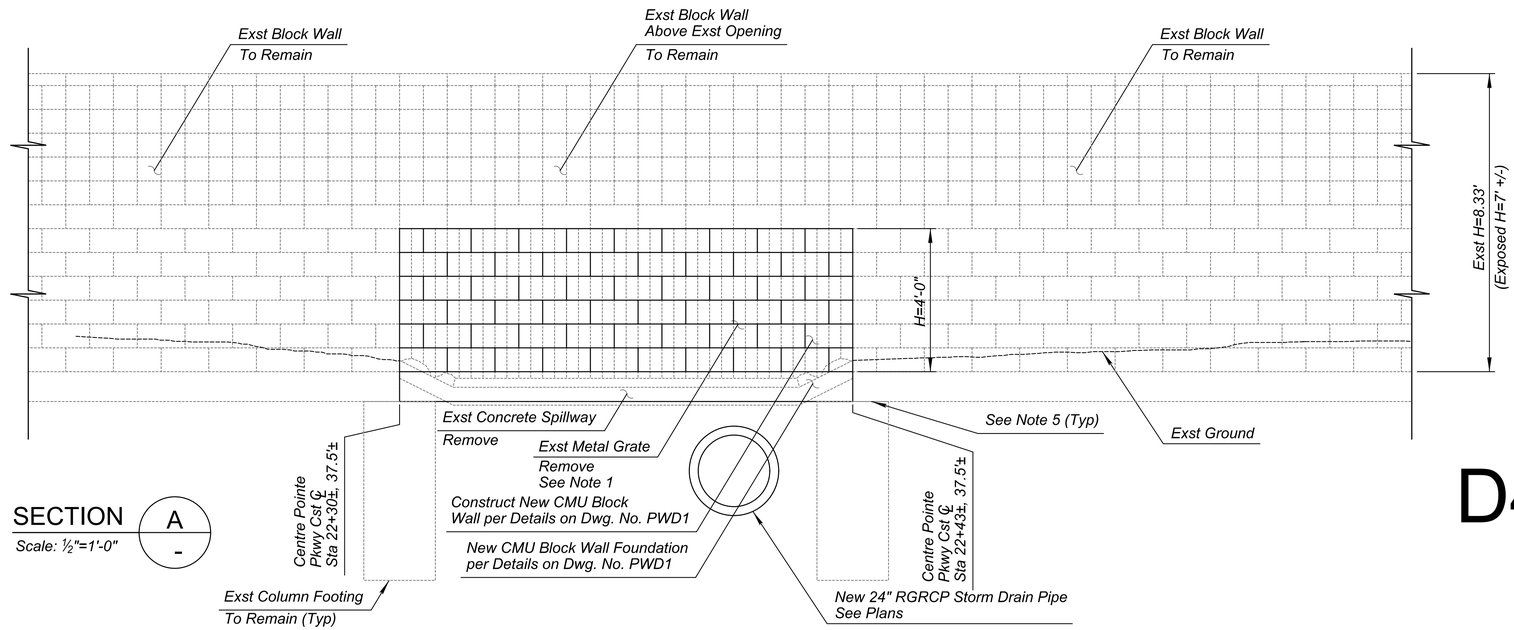
26 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



BLOCK WALL PLAN

Scale: ¼"=1'-0"



SECTION A-A

Scale: ½"=1'-0"

Notes:

1. *Cost for the Removal of the Existing Metal Grate is Considered as Included in the Cost for New CMU Block Wall Construction.*
2. *See Decomposed Granite Sheet, Dwg DG01 for Regrading Limits.*
3. *See Dwg. No. PWD01 for Additional Notes and Dimensions.*
4. *Remove Existing Footing as Needed to Construct New Wall Footing.*
5. *Existing Column Footings Shall Be Protected in Place. If New Footing Abuts Existing Column, Drill and Epoxy #5 x 2'-2" @12". Condition to be Determined Once Spillway is Removed.*

D4 BLOCK WALL RECONSTRUCTION

REMOVE CONCRETE SCUPPER
HAMILTON STREET

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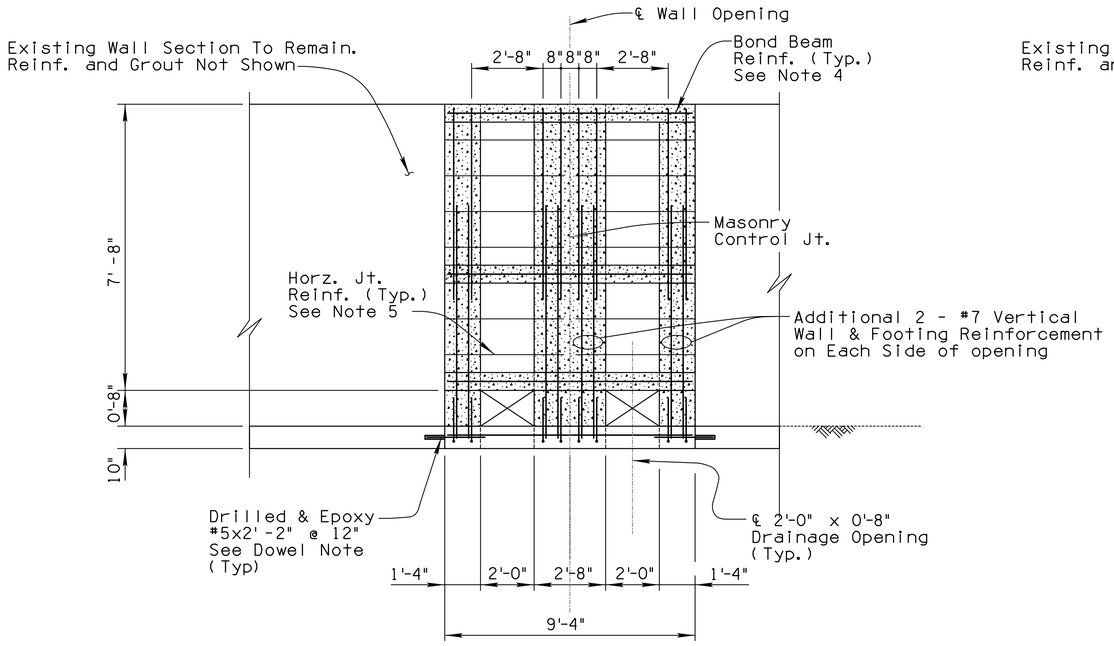
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HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
BLOCK WALL DETAIL SHEET

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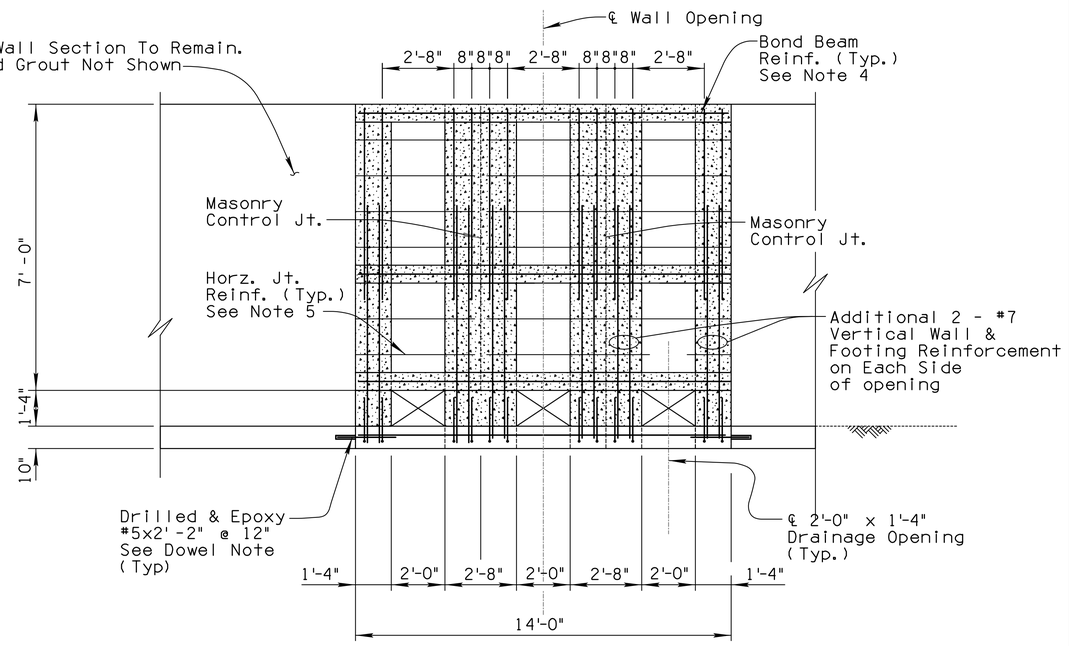
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CAROB DRIVE STA 12+00
MASONRY WALL W/ DRAINAGE OPENING
Scale: 3/8" = 1'-0"



HAMILTON STREET STA 32+70
MASONRY WALL W/ DRAINAGE OPENINGS
Scale: 3/8" = 1'-0"

LEGEND

Grout

WALL OPENING NOTES:

1. For Typical Wall Section Details and Schedule See Dwg. No. PWD01.
2. See Plans and Details D2 and D3 for Wall Opening Locations.
3. New Wall Shall Match Existing Block Wall Style, Color, Appearance and Texture.
4. The Bond Beam Reinforcement at the Masony Control Joints shall be as defined on Dwg. No. PWD01 Typical Bond Beam Detail at Control Joint.
5. Discontinue Horizontal Joint Reinforcement at Masonry Control Joints.
6. Cost of Additional Vertical Wall and Footing Reinforcement is Considered as Included in the Cost for Wall Construction.

DOWEL NOTE:

1. Anchor Dowel into Drilled Hole Using Epoxy Adhesive. Diameter and Depth of Drilled Hole Shall Be in Accordance with Epoxy Adhesive Manufacturer's Recommendation. Anchorage System Shall Be Capable of Developing a Tensile Pullout Strength of 18.6 Kips for #5 Dowel Bars. Details of the Anchorage System Shall Be Submitted to the City for Approval Prior to the Installation. Embedment Length of Dowels into the Drilled Hole Shall Not Be Less Than 8".

D5 COC DTL C-500
CONCRETE SCUPPER
THROUGH BLOCK WALL
HAMILTON STREET

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/03/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A	DESIGNED BY:	KRT
SCALE (V):	N/A	DRAWN BY:	TV
CHECKED BY:	RPW	DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SCUPPER & WALL
DETAIL SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
DR05

28 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

N

10 0 10 20
SCALE IN FEET

APN 303-41-012G
CITY OF CHANDLER

115.0'

65.0'

4:1 (Typ)

TEMPORARY BASIN

TOP = 1222.16
HW = 1221.06
BOT = 1218.06
VOL_{REQ} = 0.13 ac-ft
VOL_{PROV} = 0.14 ac-ft

R=5' (Typ)

1A 1B 1C 1D 1E 1F 1G 1H 1I 1J 1K 1L 1M 1N 1O 1P

New Drainage Esmt

BASIN COORDINATE DATA					
PT NO	STATION	OFFSET	NORTHING	EASTING	ELEVATION
1A	11+55.68	95.32' Lt	819462.43	725839.49	1222.30
1B	11+55.77	87.31' Lt	819454.43	725839.78	1222.28
1C	11+72.54	95.30' Lt	819462.83	725856.35	1218.06
1D	11+72.53	87.30' Lt	819454.83	725856.54	1218.06
1E	11+77.55	117.56' Lt	819485.20	725860.81	1222.38
1F	11+77.54	100.30' Lt	819467.95	725861.23	1218.06
1G	11+77.53	82.30' Lt	819449.95	725861.66	1218.06
1H	11+77.52	63.91' Lt	819431.57	725862.10	1222.21
1I	12+22.55	117.74' Lt	819486.49	725905.80	1222.44
1J	12+22.54	100.27' Lt	819469.02	725906.21	1218.06
1K	12+22.53	82.27' Lt	819451.03	725906.64	1218.06
1L	12+22.52	64.10' Lt	819432.86	725907.08	1222.17
1M	12+27.54	95.27' Lt	819464.15	725911.33	1218.06
1N	12+27.53	87.27' Lt	819456.15	725911.52	1218.06
1O	12+44.52	95.26' Lt	819464.55	725928.31	1222.35
1P	12+44.40	87.26' Lt	819456.55	725928.39	1222.30

New PUE

8'

+43.00

+58.00

Exst 25' SRP Irrigation Easement
(Doc #20120238312)

Prop 36" SRP Irrigation Pipe

New R/W

8.5'

12.5'

25'

5'

33± R/W

30' R/W

Carob Dr Cst ℄

Lip of Gutter=1222.14

℄ Scupper Sta 12+00.00

CAROB DRIVE

Prop 12" DIP Water

45'

22.5'

6'

22.5'

11 12 13

12" W (DIP)

F

5'

8'

New R/W

New PUE

APN 303-41-021B
CHANDLER UNIFIED SCHOOL DISTRICT NO 80

Basin Bottom = 1219.00±

NOTES:
1. See Sheet DR01 for Scupper Design.

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50900
KEVIN R. THOMAS
Date Signed 10/03/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=10'
SCALE (V):	N/A
DESIGNED BY:	KRT
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CHECKED BY:	RPW
DATE:	10/2023

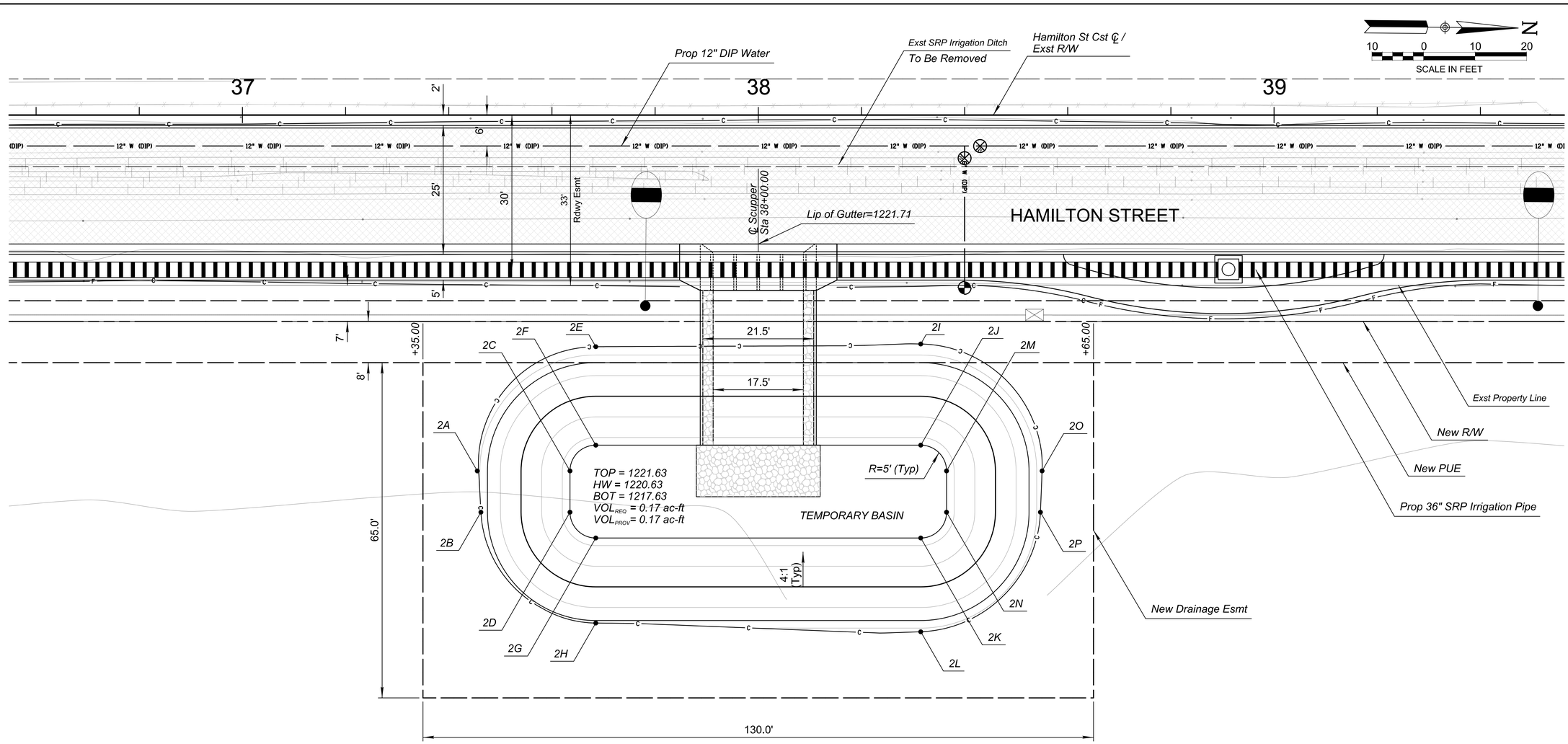
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CAROB DRIVE RETENTION BASIN DETAIL SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
DR06

29 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



BASIN COORDINATE DATA					
PT NO	STATION	OFFSET	NORTHING	EASTING	ELEVATION
2A	37+45.53	69.00' Rt	819738.08	725751.69	1222.06
2B	37+46.23	77.00' Rt	819738.85	725759.69	1221.95
2C	37+63.50	69.00' Rt	819756.05	725751.52	1217.63
2D	37+63.50	77.00' Rt	819756.13	725759.52	1217.63
2E	37+68.50	44.91' Rt	819760.82	725727.38	1222.40
2F	37+68.50	64.00' Rt	819761.01	725746.48	1217.63
2G	37+68.50	82.00' Rt	819761.17	725764.48	1217.63
2H	37+68.50	98.49' Rt	819761.33	725780.97	1221.75
2I	38+31.50	44.38' Rt	819823.82	725726.27	1222.53
2J	38+31.50	64.00' Rt	819824.00	725745.88	1217.63
2K	38+31.50	82.00' Rt	819824.17	725763.89	1217.63
2L	38+31.50	100.19' Rt	819824.34	725782.07	1222.17
2M	38+36.50	69.00' Rt	819829.05	725750.84	1217.63
2N	38+36.50	77.00' Rt	819829.12	725758.84	1217.63
2O	38+55.02	69.00' Rt	819847.57	725750.67	1222.26
2P	38+54.70	77.00' Rt	819847.32	725758.67	1222.18

APN 303-41-012G
CITY OF CHANDLER

NOTES:
1. *See Sheet DR01 for Scupper Design.*

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No.	REVISIONS	DATE	BY

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a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/03/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=10'
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

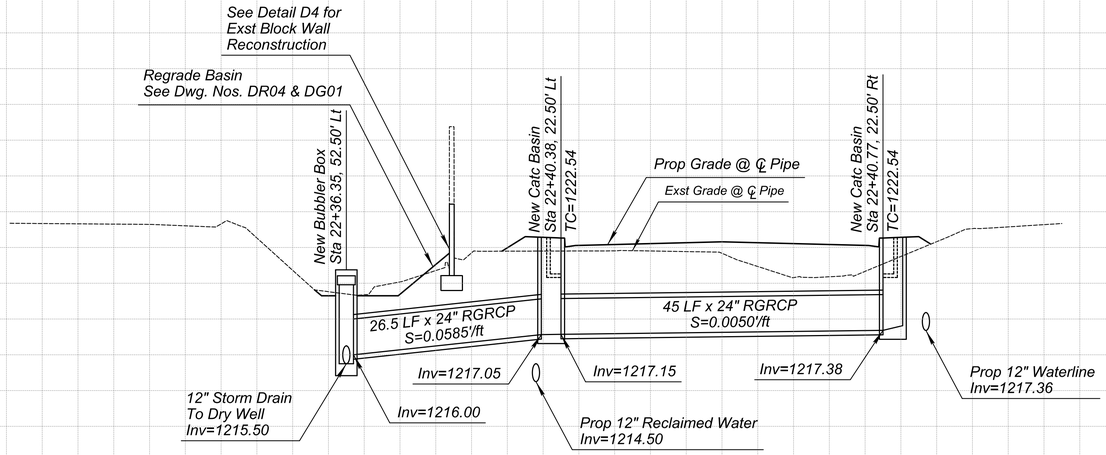
HAMILTON STREET RETENTION BASIN DETAIL SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
DR07

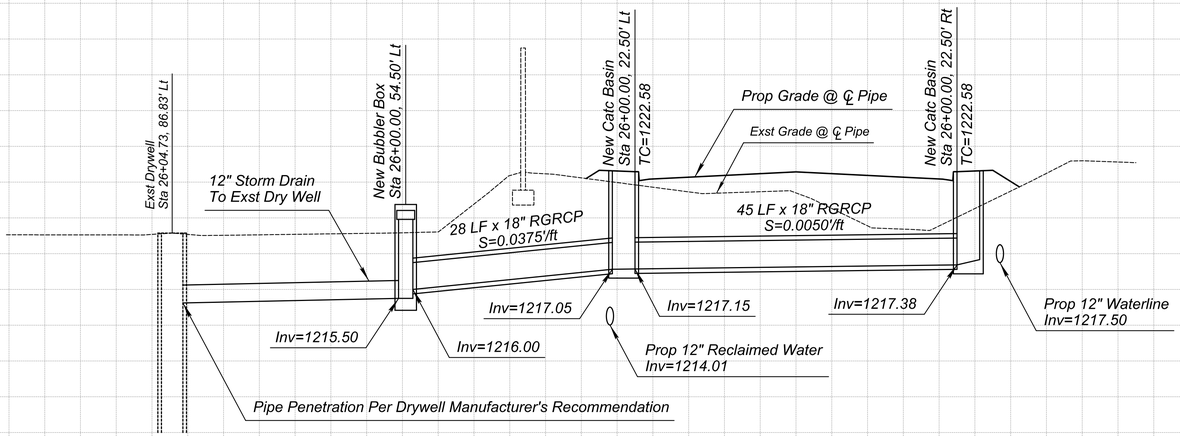
30 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



CENTRE POINTE PARKWAY
STA 22+40.00

NOTE: Provide Bicycle Safe Grates with MAG 533-1 Catch Basin.



CENTRE POINTE PARKWAY
STA 26+00.00

NOTE: Provide Bicycle Safe Grates with MAG 533-1 Catch Basin.

No.	REVISIONS	DATE	BY

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a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R.
THOMAS
Date Signed 10/03/23
ARIZONA U.S.A.
Expir-ea 06/30/25

SCALE (H):	1"=10'
SCALE (V):	1"=4'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PARKWAY
CONNECTOR PIPE PROFILES

CITY PROJECT NO.
ST2007.401

DWG. NO.
DR08

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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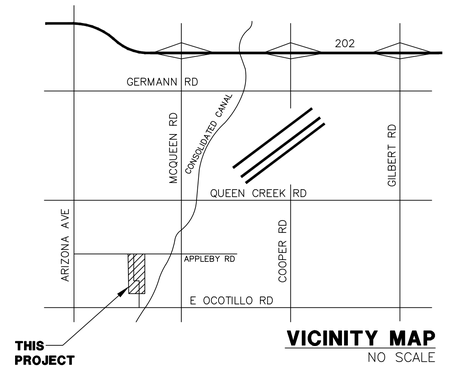
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HAMILTON ST - ST2007
STREET LIGHT PLANS

CITY OF CHANDLER
DEVELOPMENT & COMMUNITY SERVICES DEPARTMENT
DEVELOPMENT SERVICES DIVISION

STREET LIGHT NOTES
(SRP AREA)

1. INSTALLATION PER CITY OF CHANDLER STREET LIGHTING STANDARDS AND SPECIFICATIONS.
2. THE CONSTRUCTION CONTRACTOR WILL COORDINATE HIS WORK WITH THE SRP LIGHTING DIVISION PRIOR TO THE START OF CONSTRUCTION.
3. POLES WILL NOT BE SET UNTIL SRP CONDUCTOR IS IN PLACE.
4. STREET LIGHT CONDUCTOR TRENCHES WILL NOT BE BACKFILLED UNTIL INSPECTED AND APPROVED BY OFFSITE INSPECTOR.
5. ANY VARIANCE TO AN APPROVED LUMINAIRE SHALL REQUIRE A NEW DESIGN ACCOMPANIED WITH POINT-TO-POINT LIGHTING CALCULATIONS AT TEN FOOT INTERVALS INDICATING MAINTAINED FOOT-CANDLE LEVELS BETWEEN LUMINAIRES AND ACROSS THE WIDTH OF THE ROADWAY FOR APPROVAL BY THE CITY ENGINEER.
6. POLES SHALL BE SET NO CLOSER THAN TWO AND ONE-HALF (2-1/2) FEET FROM BACK OF CURB.
7. THE JUNCTION BOX NEAREST A POLE SHALL BE LOCATED OUT OF THE PUBLIC RIGHT-OF-WAY IN A PUBLIC UTILITY EASEMENT UNLESS OTHERWISE DIRECTED.
8. CONTRACTOR SHALL ENSURE STREETLIGHT OUTAGE TO NO MORE THAN 3 CALENDAR DAYS.



VICINITY MAP
NO SCALE

SHEET INDEX

SL1	COVER SHEET
SL2	STREET LIGHT DESIGN
SL3	PHOTOMETRICS
SL4	SRP CLEARANCE DETAIL

CIVIL ENGINEER:
NFRA INC.
77 E THOMAS RD, SUITE 200
PHOENIX, AZ 85012
PHONE: (602) 443-6081
CONTACT: KEVIN THOMAS
EMAIL: KTHOMAS@NFRAINC.US

ENGINEER:
WRIGHT ENGINEERING CORPORATION
165 EAST CHILTON DRIVE
CHANDLER, AZ 85225
PHONE: (480) 497-5829
FAX: (480) 497-5807

QUANTITIES LIST PUBLIC STREETS		
TOTAL	UNIT	DESCRIPTION
14	EACH	84W LED 9,000 LUMEN STREET LIGHT

UTILITY JOB DETAILS

SRP/APS JOB ORDER NUMBER:	T3417580
DESIGNER:	JAVIER ORTEGA
JOB NAME:	CENTER POINTE PKWY & IRIS PL STLT
JOB ADDRESS:	720 E IRIS PL CHANDLER, AZ 85286
TYPE (HPS, LED, OTHER):	LED
NEW OR EXISTING CABINET:	N/A
EXISTING CABINET NUMBER:	N/A
CONSUMPTION (SYSTEM WATTS):	1176 W

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED MAG SPECIFICATIONS AND STANDARD DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
3. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION (480-782-3320).
4. PROJECT ELEVATIONS ARE BASED UPON NAVD 88 DATUM. THE FOLLOWING BENCHMARK WAS UTILIZED:

BENCHMARK NUMBER	NGVD 29 ELEVATION	DESCRIPTION	EQUATION	NAVD 88 ELEVATION
#47B	1230.84	SECTION 23, TOWNSHIP 2S, RANGE 5E COC BRASS CAP IN CONCRETE, FLUSH, AT THE INTERSECTION OF LANTANA RANCH BLVD AND YELLOWSTONE PLACE, 1320' EAST OF MCQUEEN ROAD AND 280' SOUTH OF OCOTILLO RD	-	1232.50

5. PRIOR TO ANY CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE LANDSCAPE COMPLIANCE COORDINATOR AT 480-782-3428. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITIONS USING THE FOLLOWING REQUIREMENTS:
   A. ALL LANDSCAPE IMPACTED BY CONSTRUCTION SHALL BE REPLACED IN KIND AND SIZE, OR AS DETERMINED BY THE CITY;
   B. ALL IRRIGATION SYSTEMS SHALL BE RESTORED TO FULLY FUNCTIONING STATUS. ANY IRRIGATION LOCATED BENEATH ASPHALT OR CONCRETE SHALL BE SLEEVED WITH SCHEDULE 40 PVC TWO NOMINAL SIZES LARGER;
   C. THE AREA OF CONSTRUCTION SHALL BE TREATED WITH PRE-EMERGENT HERBICIDE (I.E. SURFLAN);
   D. GRANITE OF A SIZE AND COLOR TO MATCH EXISTING SHALL BE SPREAD A MINIMUM OF TWO INCHES THICK;
   E. THE STREET DIVISION SHALL BE CONTACTED TO INSPECT ALL WORK BEFORE A CONDITIONAL ACCEPTANCE IS ISSUED;
   F. THE CONTRACTOR/DEVELOPER SHALL MAINTAIN THE AREA FOR NINETY DAYS AFTER CONDITIONAL ACCEPTANCE. AFTER 90 DAYS THE CITY SHALL BE CONTACTED FOR FINAL ACCEPTANCE AND ASSUMPTION OF MAINTENANCE.
6. WORK PERFORMED BY THE CONTRACTOR.
   A. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
   B. WHENEVER THE INSPECTOR FINDS ANY WORK BEING PERFORMED IN A DANGEROUS OR UNSAFE MANNER, OR CONTRARY TO THE PLANS OR SPECIFICATIONS, OR NOT MEETING THE INTENT OF THE PLANS OR SPECIFICATIONS, THE INSPECTOR WILL ISSUE A STOP WORK ORDER. UPON ISSUANCE OF A STOP WORK ORDER, THE CITED WORK SHALL IMMEDIATELY CEASE. THE STOP WORK ORDER SHALL STATE THE REASON FOR THE ORDER, AND THE CONDITIONS WHICH CITED WORK IS AUTHORIZED TO RESUME UPON WRITTEN ORDER TO RESUME WORK. WHERE AN EMERGENCY EXISTS, THE INSPECTOR SHALL NOT BE REQUIRED TO GIVE A WRITTEN NOTICE PRIOR TO STOPPING THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND DELAYS FOR THE WORK RELATED TO THE STOP ORDER.
7. THE CONTRACTOR SHALL UNCOVER ALL EXISTING CITY UTILITY LINES BEING TIED INTO TO VERIFY THEIR TYPE, CONDITION, LOCATION, INVERT, SLOPE, AND ANY OTHER INFORMATION NEEDED TO DETERMINE THAT THE UTILITY CONNECTION WILL FUNCTION AS DESIGNED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ANY REPAIRS NECESSARY TO THE LATERAL OR MAIN LINES OF THE CITY WATER, RECLAIMED WATER, SANITARY SEWER, AND/OR STORM DRAIN SYSTEM NECESSARY FOR THE CONNECTION TO FUNCTION AS DESIGNED. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PRIVATE UTILITIES (ELECTRIC, TELEPHONE, PIPELINES, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION. BLUE STAKE TELEPHONE (602) 263-1100.
8. THE CITY OF CHANDLER IS NOT RESPONSIBLE FOR LIABILITY INCURRED DUE TO DELAYS AND/OR DAMAGES TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.
9. NO FINAL ACCEPTANCE SHALL BE ISSUED UNTIL 4 MIL PHOTO MYLAR REPRODUCIBLE "AS-BUILT" PLANS CERTIFIED AND SEALED BY A REGISTERED CIVIL ENGINEER, HAVE BEEN SUBMITTED AND ACCEPTED BY THE CITY ENGINEER.
10. APPLICATIONS FOR STREET CUT PERMITS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO APPROVAL OF IMPROVEMENT PLANS. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336 AND AS MODIFIED BY CITY SUPPLEMENTS.
11. BACKFILLING SHALL NOT BE STARTED UNTIL LINES ARE APPROVED BY THE CITY ENGINEER. ALL BACKFILL SHALL HALF-SACK CLSM UNLESS OTHERWISE APPROVED ON THE PLANS. ABC OR NATIVE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH MAG SECTION 601, TYPE I. BACKFILL PLACEMENT AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD DTL 200 T-TOP WITH 16" MIN DEPTH ABC SHELF.
12. CONSTRUCTION OF CONCRETE OR PAVING ITEMS SHALL NOT COMMENCE UNTIL ALL UNDERGROUND WORK HAS BEEN INSPECTED AND TESTED.
13. DISPOSAL OF AND STOCKPILING OF EXCESS MATERIAL WITHIN THE CHANDLER CITY LIMITS OR PLANNING AREA SHALL BE DONE IN SUCH A WAY THAT WILL NOT CREATE A NUISANCE. THE PLACING OF MATERIAL ON PRIVATE PROPERTY OF ANOTHER REQUIRES WRITTEN AUTHORIZATION. EARTHWORK STOCKPILES ARE NOT TO EXCEED 6 FEET IN HEIGHT. SLOPES ON ALL SIDES OF THE STOCKPILE SHALL NOT EXCEED A 1 TO 2 RATIO OF HEIGHT TO LENGTH. ANY EARTHWORK STOCKPILE, EVEN LESS THAN 6 FEET, MUST BE REMOVED WITHIN 7 DAYS OF CITY NOTIFICATION IF DUST SUPPRESSION EFFORTS FAIL TO MAINTAIN SATISFACTORY AIRBORNE CONTAMINANT CONTROL.
14. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL AND APPROVED TRAFFIC SEQUENCING PLANS AND/OR NOTES.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES THE CONTRACTOR SHALL UTILIZE A PM10-CERTIFIED STREET SWEEPER FOR STREET CLEANING.
16. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
17. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN SEWER SERVICES AND WATER OR FIRELINE SERVICES. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN RECLAIMED WATER SERVICES AND SEWER, WATER, OR FIRELINE SERVICES.
18. SETBACKS FOR UTILITY POLES, STRUCTURES, AND OTHER SIMILAR FACILITIES (NOT INCLUDING LANDSCAPING) GREATER THAN 18 INCHES IN HEIGHT SHALL BE 5.5 FEET FROM THE BACK OF CURB UNLESS APPROVED IN WRITING BY THE CITY ENGINEER. IN CASES WHERE THE FACILITIES ARE ADJACENT TO A DECELERATION LANE, BUS BAY, OR MEDIAN CURB, THE SETBACK CAN BE REDUCED TO 2.5 FEET FROM THE BACK OF CURB.
19. SCREEN WALLS OVER 7', RETAINING WALLS OVER 4' MUST HAVE A BUILDING PERMIT AND BE IN CONFORMANCE WITH CHANDLER BUILDING CODE.
20. ALL UNDERGROUND FACILITIES INSTALLED IN ANY REAL PROPERTY OUTSIDE THE CITY'S RIGHT-OF-WAY SHALL COMPLY WITH THE FOLLOWING MARKING STANDARDS IN ACCORDANCE WITH HOUSE BILL 2256. A YELLOW INSULATED COPPER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND UTILITIES FOR FIRE LINE PIPING, POTABLE WATER DISTRIBUTION PIPING, SANITARY SEWER LINES, STORMWATER PIPING, RECLAIMED WATER PIPING, GRAVITY FLOW IRRIGATION PIPING AND PRESSURIZED IRRIGATION PIPING LARGER THAN TWO (2) INCHES IN DIAMETER UNLESS THESE FACILITIES CAN BE DETECTED FROM ABOVE GROUND WITH AN ELECTRONIC LOCATING DEVICE. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE PIPING. THE TRACER WIRE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.
21. ANY CONSTRUCTION DETOURS WILL REQUIRE AN ALL-WEATHER SURFACE PER MARICOPA COUNTY AIR QUALITY REQUIREMENTS.
22. THE CONTRACTOR SHALL SUPPLY PUBLIC WORKS INSPECTOR CONSTRUCTION MATERIAL TESTING DOCUMENTATION THROUGHOUT THE PROJECT.
23. ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETE PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE.
24. THE FOLLOWING UTILITY COMPANIES HAVE BEEN IDENTIFIED BY BLUE STAKE COORDINATION AND PROJECT PLANS HAVE BEEN SUBMITTED MOST RECENTLY AS NOTED:

SETBACK CERTIFICATION:

I HEREBY CERTIFY THAT SETBACKS FOR STREETLIGHTS ON ALL STREETS SHALL BE A MINIMUM OF 2.5 FEET BACK OF CURB AND 1 FOOT FROM SIDEWALKS.

ADAM BOWERS — 03-27-2023
REGISTERED PROFESSIONAL ENGINEER — DATE

46691 — 09-30-2025 — WRIGHT ENGINEERING CORP.
REGISTRATION NO. — EXPIRATION DATE — FIRM NAME

Registered Professional Engineer (Retired) Certificate No. 46691 ADAM M. BOWERS Date Signed 3-27-23 Expires 9-30-25

UTILITIES WITHIN OR AFFECTED BY THE PROJECT	
UTILITY COMPANY	DATE SUBMITTED
SOUTHWEST GAS	2/17/2022
COX COMMUNICATIONS	2/17/2022
Ccentury link	7/26/2022
SRP (POWER)	11/16/2022
SRP (SRVWUA)	11/16/2022
CITY OF CHANDLER	11/16/2022

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C.O.C. LOG NO: CIV21-0015

WRIGHT ENGINEERING PROJECT NO: **20443**
DESIGN BY: MRS
DRAWN BY: MRS
CHECKED BY: AMB

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE • CHANDLER, ARIZONA 85225
PHONE 480.497.5829 • FAX 480.497.5807
www.wrightengineering.us

PROJECT: CHANDLER, ARIZONA
HAMILTON ST - ST2007
STREET LIGHT AND TSFO PLAN

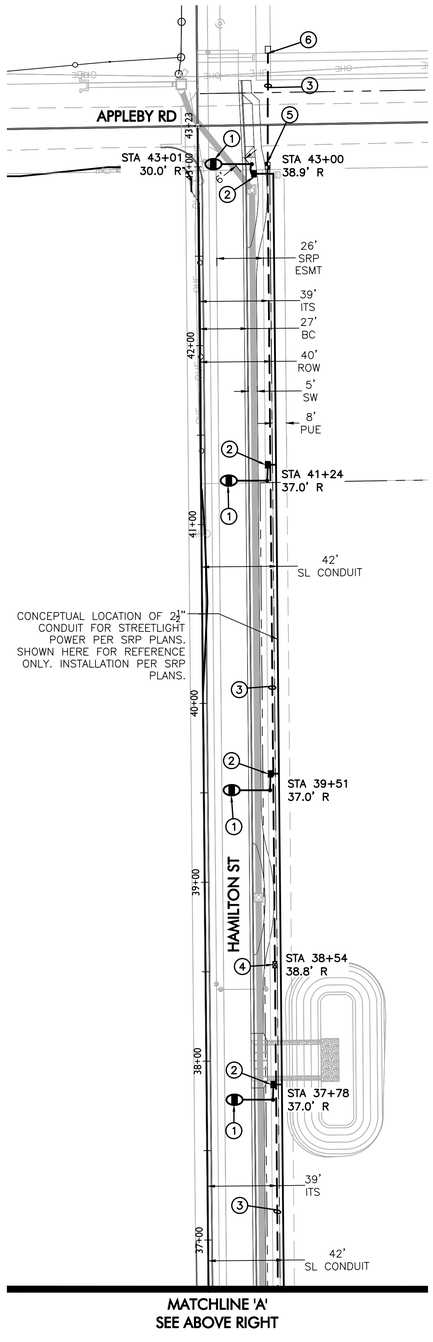
TITLE: COVER SHEET

NO.	DATE	SUBMITTALS/REVISIONS (DESCRIPTIONS)
1	OCT 2022	1ST CITY SUBMITTAL
2	MAR 2023	2ND CITY SUBMITTAL

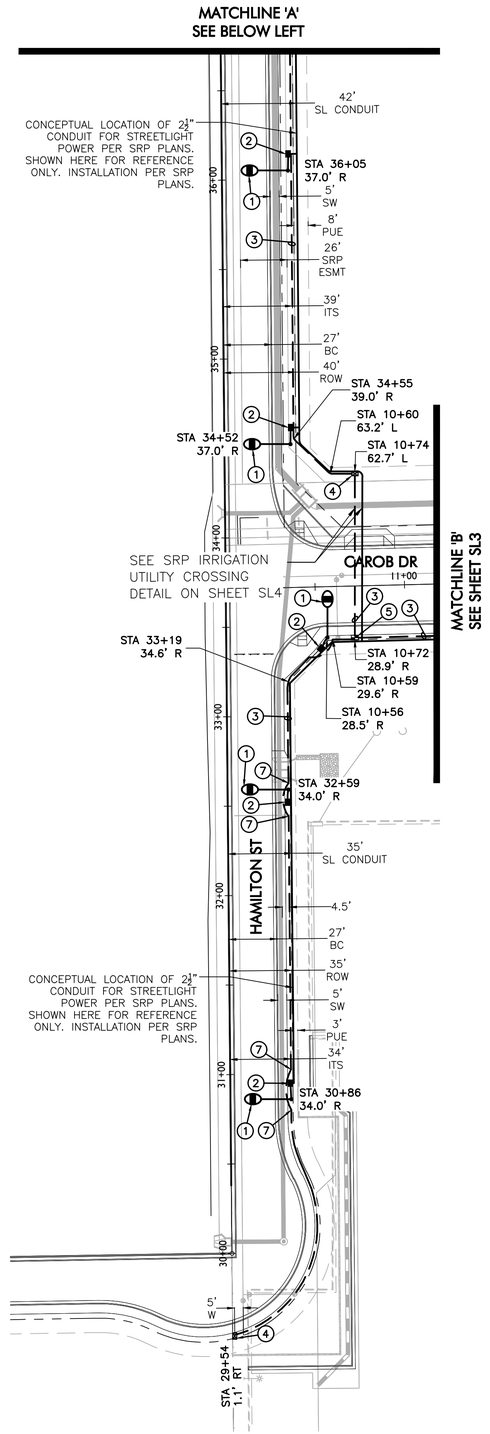
Registered Professional Engineer (Retired) Certificate No. 46691 ADAM M. BOWERS Date Signed 3-27-23 Expires 9-30-25

DRAWING NO: **SL1** OF 4

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NOTE:
ALL CONDUIT RUNS SHALL MAINTAIN 2' OF VERTICAL SEPARATION FROM CITY WET UTILITY PER COC DETAIL C-112-2



LEGEND

- PUBLIC: 9,000 LUMEN LED STREET LIGHT ON A SINGLE ARM POLE WITH A 35' MOUNTING HEIGHT PER C.O.C. DETAIL C-751-1. LOCATE A MINIMUM OF 2'-6" BEHIND BACK OF CURB.
- EXISTING STREET LIGHT
- FIRE HYDRANT
- PULL BOX
- NEW STREET LIGHT CONDUIT
- NEW ITS CONDUIT
- #9 ITS PULL BOX
- #7 PULL BOX WITH EXTENSION
- EXISTING #7 PULL BOX

CONSTRUCTION NOTES

1. PUBLIC: INSTALL (1) 84W (9,000 LUMEN) TYPE II LED STREET LIGHT SINGLE ARM POLE WITH 35'-0" MOUNTING HEIGHT PER C.O.C. DETAIL C-751-1. FOUNDATION, CONDUIT, & PULL BOX PER C.O.C. STANDARDS.
2. INSTALL ONE PULL BOX PER C.O.C. DETAILS C-757-1 & C-757-3. RUN 1" CONDUIT WITH (2) #12 THHN/THWN CONDUCTORS & (1) #8 GROUND TO POLE.
3. INSTALL 4-2" CONDUITS FOR CITY FIBER ITS INTERCONNECT PER C.O.C. DETAIL C-104.
4. INSTALL #7 PULL BOX WITH 24" EXTENSION (36" TOTAL DEPTH) & SWEEP 4-2" CITY FIBER CONDUITS INTO PULL BOX
5. INSTALL #9 PULL BOX & SWEEP 4-2" CITY FIBER CONDUITS INTO PULL BOX
6. RUN NEW CONDUIT INTO EXISTING PULL BOX. IF PULL BOX IS DISTURBED RESET OR INSTALL NEW #7 PULL BOX IF THE EXISTING #7 PULL BOX IS DAMAGED
7. DEFLECTION SHOWN IS FOR CLARITY. THE COC PROPOSED RUNNING LINE REMAINS STRAIGHT WHEN PASSING STREETLIGHTS.

GRAPHIC SCALE

40 20 0 20 40 80

1 INCH = 40 FEET

C.O.C. LOG NO: CIV21-0015

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

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WRIGHT ENGINEERING PROJECT NO:
20443

DESIGN BY: MRS
DRAWN BY: MRS
CHECKED BY: AMB

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE • CHANDLER, ARIZONA 85225
PHONE 480.497.5829 • FAX 480.497.5807
www.wrightengineering.us

PROJECT: TITLE:

CHANDLER, ARIZONA
HAMILTON ST - ST2007
STREET LIGHT AND TSFO PLAN

STREET LIGHT DESIGN

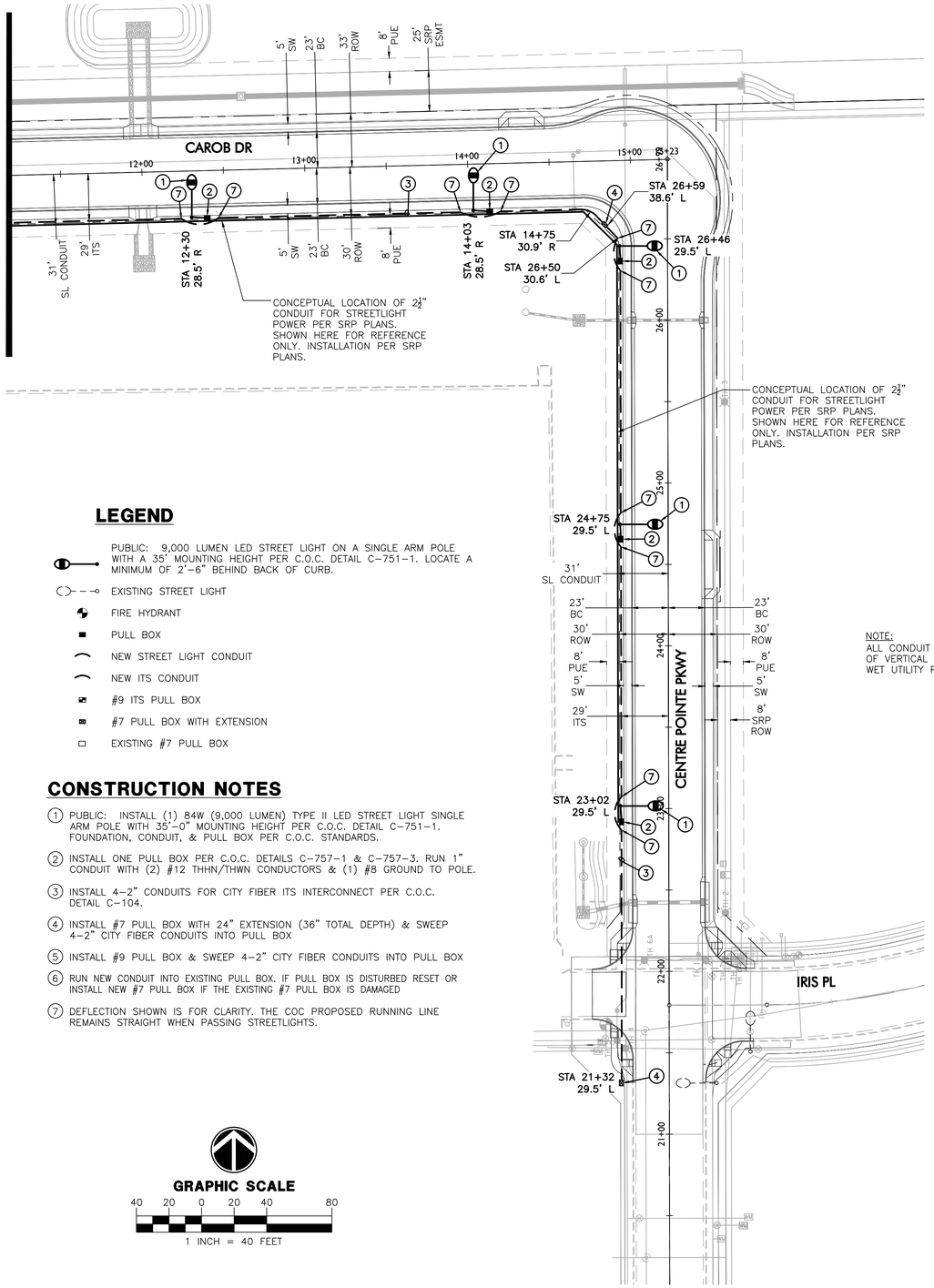
NO.	DATE	SUBMITALS/REVISIONS (DESCRIPTIONS)
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Registered Professional Engineer (Retired)
Certificate No.
46691
ADAM W. BOWERS
Date Signed 3-27-23
Expires 9-30-25

DRAWING NO:
SL2
OF 4

H:\2020\20443-Hamilton Street ST2007\20443-SL-HAMILTON.dwg

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LEGEND

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- EXISTING STREET LIGHT
- FIRE HYDRANT
- PULL BOX
- NEW STREET LIGHT CONDUIT
- NEW ITS CONDUIT
- #9 ITS PULL BOX
- #7 PULL BOX WITH EXTENSION
- EXISTING #7 PULL BOX

CONSTRUCTION NOTES

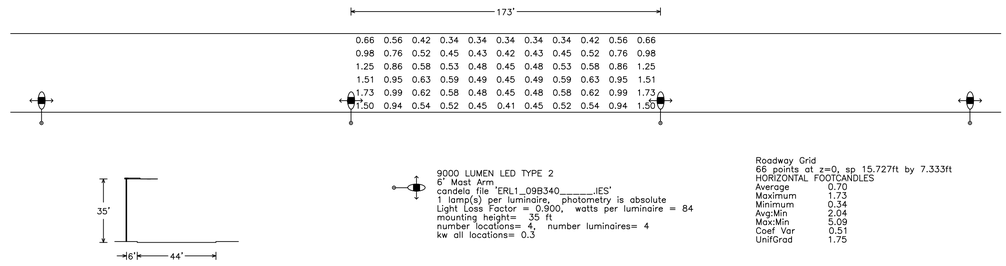
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GRAPHIC SCALE

40 20 0 20 40 80

1 INCH = 40 FEET

NOTE:
ALL CONDUIT RUNS SHALL MAINTAIN 2' OF VERTICAL SEPARATION FROM CITY WET UTILITY PER COC DETAIL C-112-2



9000 LUMEN LED TYPE 2
6' Mast Arm
candela file 'ERL1_09B340_____.IES'
1 lamp(s) per luminaire, photometry is absolute
Light Loss Factor = 0.900, watts per luminaire = 84
mounting height= 35 ft
number locations= 4, number luminaires= 4
kw all locations= 0.3

Roadway Grid
66 points at z=0, sp 15.727ft by 7.333ft
HORIZONTAL FOOTCANDLES

Average	0.70
Maximum	1.73
Minimum	0.34
Avg:Min	2.04
Max:Min	5.09
Coef Var	0.51
UnifGrad	1.75

WRIGHT ENGINEERING PROJECT NO:
20443

DESIGN BY: MRS
DRAWN BY: MRS
CHECKED BY: AMB

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE • CHANDLER, ARIZONA 85225
PHONE 480.497.5829 • FAX 480.497.5807
www.wrightengineering.us

PROJECT: TITLE:

CHANDLER, ARIZONA
HAMILTON ST - ST2007
STREET LIGHT AND TSFO PLAN

STREET LIGHT DESIGN

NO.	DATE	SUBMITTALS/REVISIONS (DESCRIPTIONS)
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Registered Professional Engineer (Retired)
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3-27-23
Expires 9-30-25

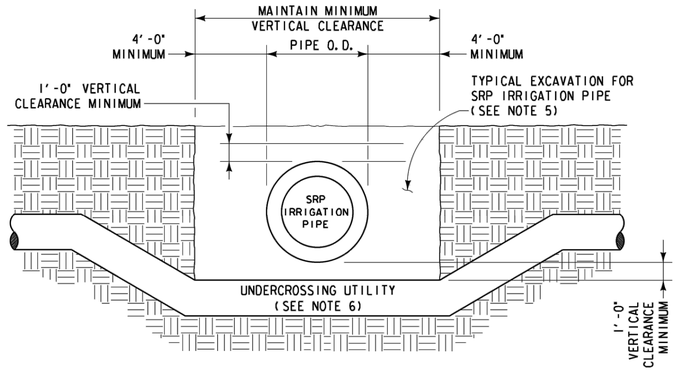
C.O.C. LOG NO: CIV21-0015

DRAWING NO:
SL3
OF 4

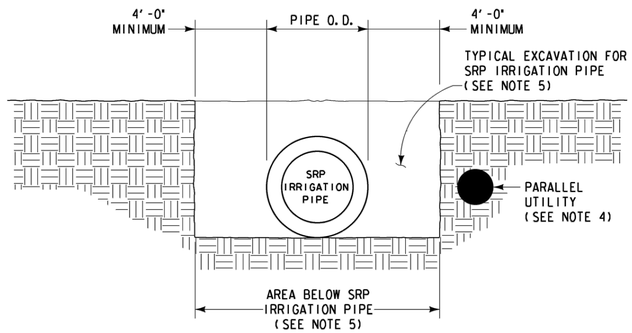
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in Maricopa County: (602) 263-1100

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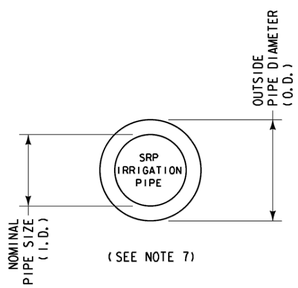
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PIPELINE - UNDERCROSSING

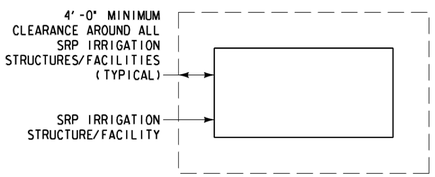


PIPELINE - PARALLEL UTILITY



NOMINAL PIPE SIZE (I.D.)	OUTSIDE PIPE DIAMETER (O.D.)
24"	30"
30"	37"
36"	44"
42"	51"
48"	58"
54"	65"
60"	72"
66"	79"
72"	86"

OUTSIDE DIAMETER SRP IRRIGATION PIPE



IRRIGATION STRUCTURE/FACILITY CLEARANCE

NOTES

1. OVERCROSSINGS OF SRP IRRIGATION PIPE ARE REVIEWED ON A CASE-BY-CASE BASIS. EXCEPT FOR THOSE CASES SPECIFICALLY IDENTIFIED BELOW, OVERCROSSINGS ARE TYPICALLY NOT ALLOWED.
2. PRIMARY POWER/ELECTRIC FACILITIES, GAS, AND SEWER, MUST GO UNDER THE SRP IRRIGATION PIPE. OVERCROSSINGS OF TRAFFIC SIGNAL, STREET LIGHT ELECTRICAL FACILITIES, WATER, AND COMMUNICATIONS, ARE ALLOWED UP TO 3" IN CONDUIT AS LONG AS THE 1'-0" CLEARANCE OVER THE PIPE IS MET.
3. MAINTAIN MINIMUM 12' CLEARANCE BETWEEN SRP IRRIGATION PIPE AND CLOSEST POINT OF OVERCROSSING SCUPPER. SCUPPER SHALL CONFORM TO MAG STANDARD DETAIL 203 OR 206.
4. UTILITIES PARALLEL TO SRP IRRIGATION PIPE ARE REVIEWED ON A CASE-BY-CASE BASIS. LOCATE PARALLEL UTILITY OUTSIDE OF AREA SRP EXCAVATES WHEN MAINTAINING IRRIGATION PIPE. TYPICAL EXCAVATION INCLUDES AREA ABOVE AND TO EACH SIDE OF SRP IRRIGATION PIPE. SIDE EXCAVATION IS 4'-0" FROM THE OUTSIDE DIAMETER OF THE SRP IRRIGATION PIPE.
5. OTHER UTILITIES NOT PERMITTED IN THESE AREAS.
6. CLEARANCE IS MEASURED FROM OUTSIDE DIAMETER OF SRP IRRIGATION PIPE. OUTSIDE DIAMETER IS SIGNIFICANTLY LARGER THAN NOMINAL PIPE SIZE (INSIDE DIAMETER) NOTED ON PLAN/PROFILE DRAWINGS. SEE TABLE FOR NOMINAL PIPE SIZES AND OUTSIDE DIAMETERS.
7. SPECIFIED CLEARANCES ARE FOR USE WITH RUBBER GASKETED REINFORCED CONCRETE PIPE (RGRCP) UP TO AND INCLUDING 72" NOMINAL PIPE SIZE. GREATER CLEARANCE OR REPLACEMENT IS REQUIRED FOR LARGER DIAMETER RGRCP, CAST-IN-PLACE PIPE (CIPP) AND NON-REINFORCED CONCRETE PIPE.
8. ASSURE CONTINUOUS SUPPORT AND PROTECTION OF SRP IRRIGATION PIPE. DAMAGE TO SRP IRRIGATION PIPE/SYSTEM WILL BE REPAIRED BY SRP. ALL DIRECT AND INDIRECT COSTS SHALL BE BORNE BY OTHER UTILITY/LICENSEE.
9. TRENCH BACKFILL COMPACTION SHALL BE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) TYPE I OR TYPE III, EXCEPT THAT 95 % COMPACTION SHALL BE REQUIRED FROM 1'-0" ABOVE TOP OF PIPE TO BOTTOM OF TRENCH. WATER CONSOLIDATION IS NOT PERMITTED.
10. COMPLY WITH MAG UNIFORM STANDARD SPECIFICATIONS AND STANDARD DETAILS UNLESS OTHERWISE NOTED IN PROJECT SPECIFIC SRP DOCUMENTS. MOST STRINGENT REQUIREMENTS SHALL APPLY UNLESS SPECIFICALLY NOTED OTHERWISE IN SRP DOCUMENTS.
11. COMPLY WITH ALL APPLICABLE STATUTES, ORDINANCES AND REGULATIONS INCLUDING BLUE STAKE LAW (A.R.S. SEC. 40-360-21 ET SEQ.).
12. THESE GUIDELINES ARE PROVIDED AS A GENERAL AID TO PLANNING. ACTUAL SRP REQUIREMENTS MAY VARY BASED ON SITE-SPECIFIC CONDITIONS, OPERATIONAL CONSIDERATIONS, ETC.
13. AN SRP LICENSE IS REQUIRED FOR UTILITIES CROSSING/PARALLEL TO SRP IRRIGATION PIPE IN SRP RIGHT-OF-WAY. SRP REQUIRES ENGINEER DESIGNED UTILITY CROSSING/LOCATION AND EXCAVATION PLAN.
14. NOTIFY SRP INSPECTOR A MINIMUM OF 72 HOURS BEFORE STARTING CONSTRUCTION IN OR AROUND SRP IRRIGATION FACILITIES. AN IRRIGATION OUTAGE AGREEMENT MUST BE COMPLETED BY THE CONTRACTOR IF A DRY-UP OF ANY PART OF THE IRRIGATION SYSTEM WILL BE NECESSARY DURING CONSTRUCTION. ISSUANCE OF A LICENSE DOES NOT PROVIDE FOR A CONSTRUCTION DRY-UP.

REFERENCES

SALT RIVER PROJECT
RIGHT-OF-WAY GUIDELINES____WES-ROWGUIDE

REVISIONS

REV NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
REVISED SLOPED EXCAVATION TO VERTICAL. REVISED NOTE 2 AND 4.					
7	JWS	-	BRM	AWJ	10/26/20
	JWS	-	BRM	AWJ	
INITIAL ISSUE.					
0	MOD	CWT	CWT	REL	04/06/98
	MOD	CWT	CWT	REL	

SALT RIVER PROJECT
WATER ENGINEERING STANDARD

UTILITIES CROSSING OR PARALLEL TO SRP IRRIGATION PIPE

SCALE: NONE | 02604001.WES
DWG SIZE: 17X22

WES-02604-001

WRIGHT ENGINEERING PROJECT NO: 20443
DESIGN BY: MRS
DRAWN BY: MRS
CHECKED BY: AMB

WRIGHT engineering corporation
ELECTRICAL ENGINEERING AND DESIGN
165 EAST CHILTON DRIVE • CHANDLER, ARIZONA 85225
PHONE 480.497.5829 • FAX 480.497.5807
www.wrightengineering.us

PROJECT: CHANDLER, ARIZONA
HAMILTON ST - ST2007
STREET LIGHT AND TSFO PLAN

TITLE: STREET LIGHT DESIGN

NO.	DATE	SUBMITTALS/REVISIONS (DESCRIPTIONS)
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2	MAR 2023	2ND CITY SUBMITTAL

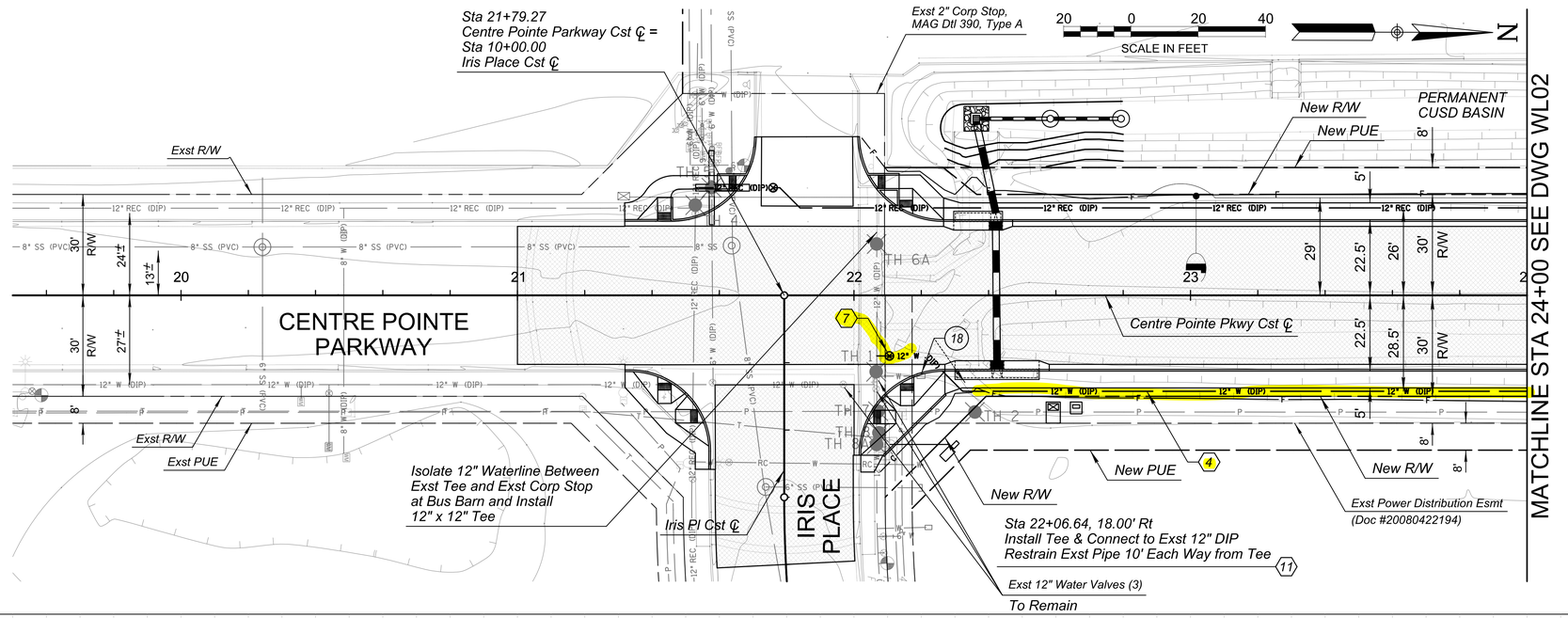
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ADAM M. BOWERS
3-27-23
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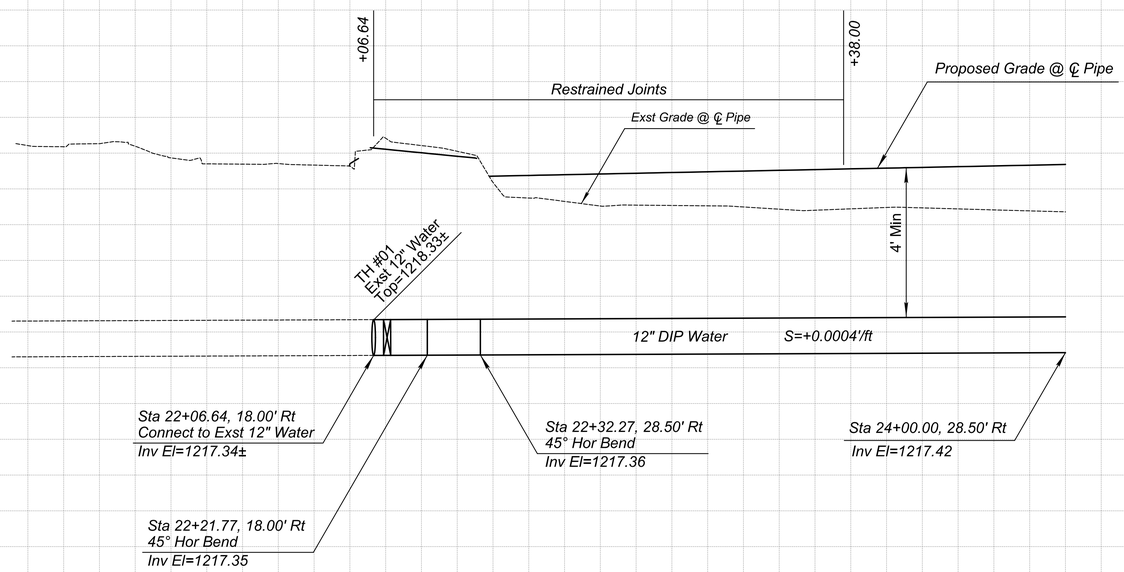
C.O.C. LOG NO: CIV21-0015

DRAWING NO: SL4
OF 4

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
in Maricopa County: (602) 263-1100

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	198
7	Install 12" Water Gate Valve per COC Dtl C-307 & C-317	EA	1
11	Install Tee, Size as Noted	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
18	Remove Exst Boxes (4), Blowoff Assembly, Ball Valves, Fittings & Piping for Landscaping	EA	1

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL01 for Roadway Plan & Profile
3. See Sheet DR08 for Storm Drain Plan & Profile.
4. See Sheet SL3 for Street Lighting Plan.
5. See Sheet RL01 for Reclaimed Waterline Plan & Profile.

M Match
P Protect
S Sawcut

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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 03/14/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	03/2023

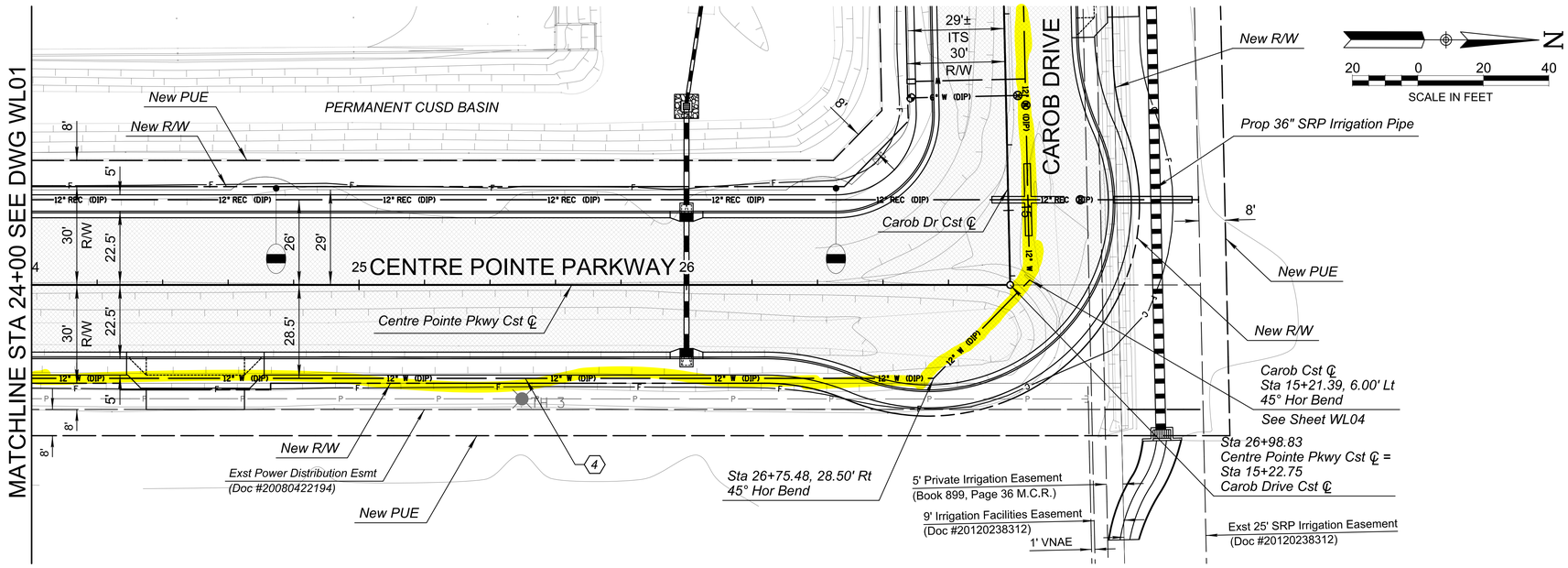
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PKWY 12" DIP
WATERLINE PLAN & PROFILE

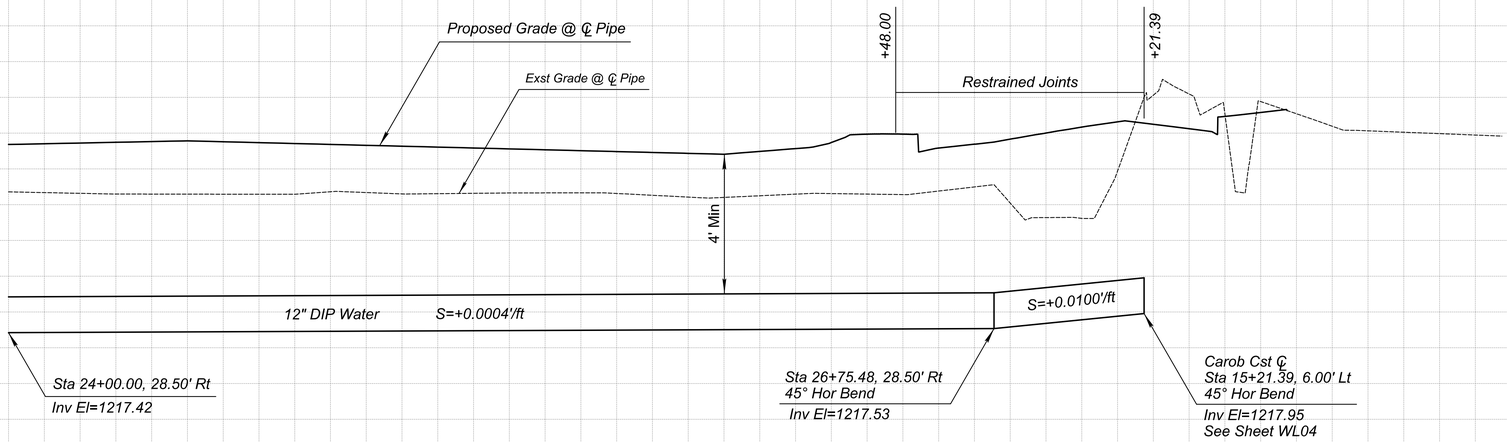
CITY PROJECT NO.
ST2007.401

DWG. NO.
WL01

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

kthomas2 NFRA-TOG-N.TBL 3/14/2023 11:03:20 AM w:\transportation\chandler\st2007 hamilton street\cadd\civil\nfra\Plan Sheets\ST2007_WL01.dgn





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	*Install 12" DIP Waterline per COC Dtl C-308*	LF	318

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. *Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.*
2. *See Sheet PL02 for Roadway Plan & Profile*
3. *See Sheet DR08 for Storm Drain Plan & Profile.*
4. *See Sheet SL3 for Street Lighting Plan.*
5. *See Sheet RL02 for Reclaimed Waterline Plan & Profile.*

M Match
P Protect
S Sawcut

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NO	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — 50900 KEVIN R. THOMAS — Date Signed 03/30/23 — ARIZONA U.S.A. — Expires 06/30/25

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SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
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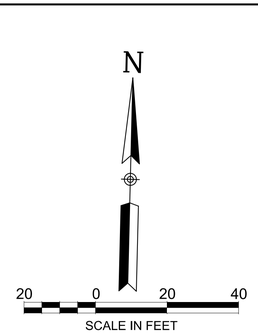
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PKWY 12" DIP WATERLINE PLAN & PROFILE

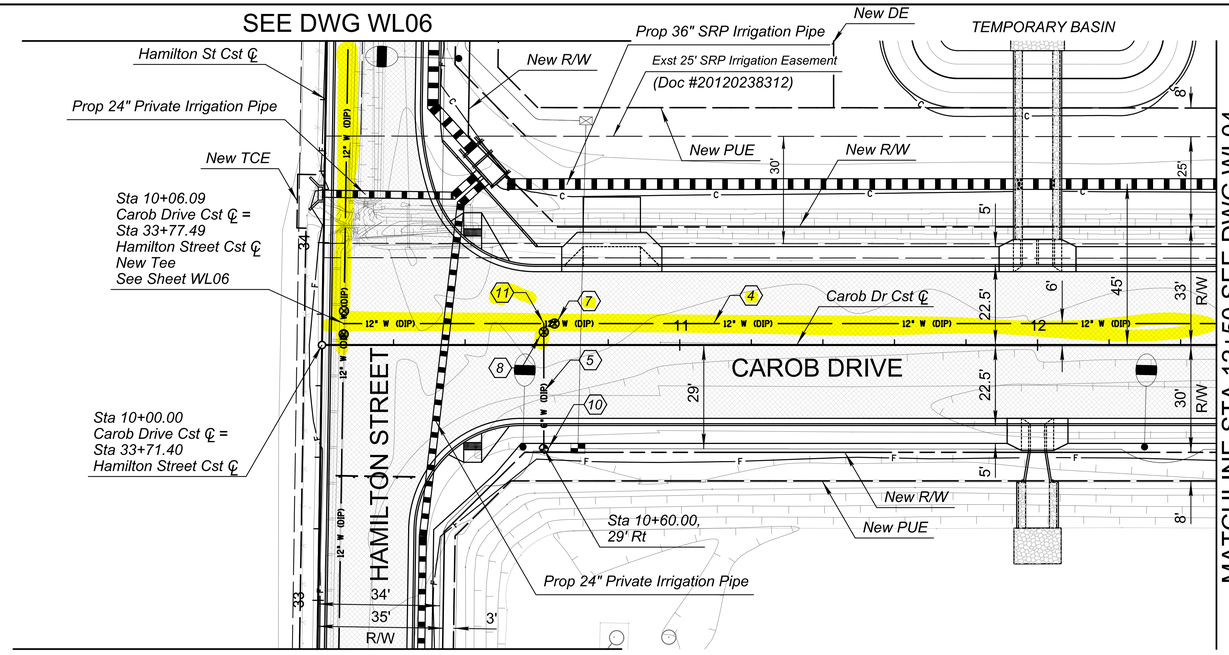
CITY PROJECT NO.
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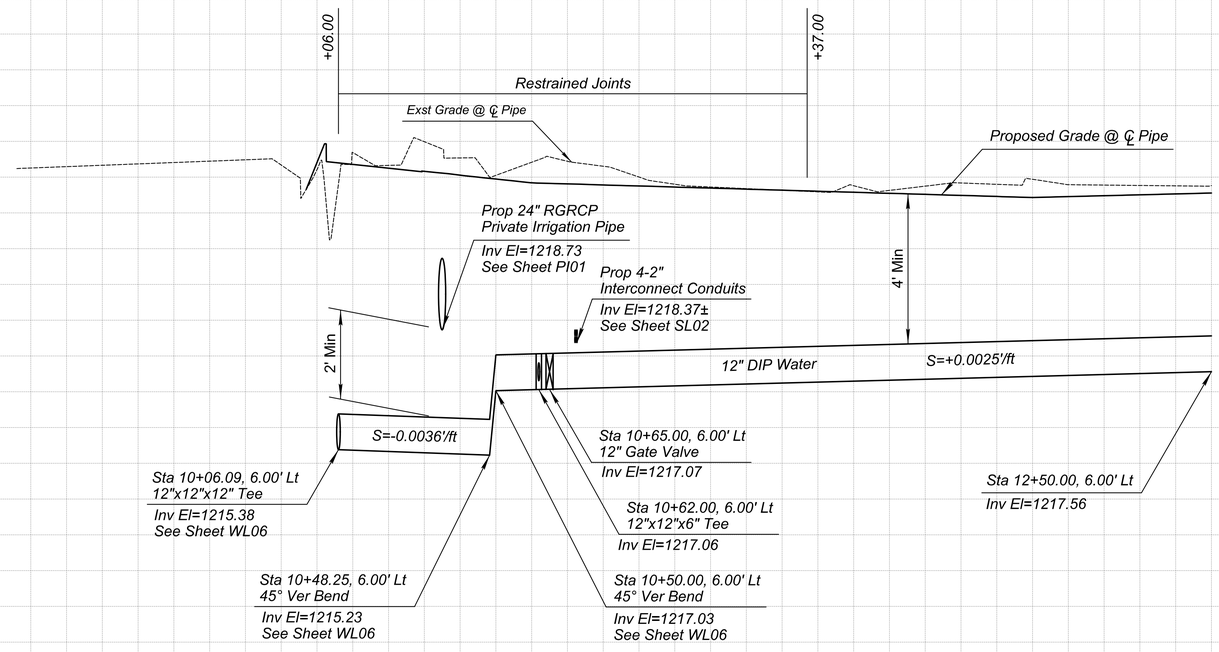
DWG. NO.
WL02

37 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS







CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	244
5	Install 6" DIP Waterline per COC Dtl C-308	LF	35
7	Install 12" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
8	Install 6" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
10	Install Fire Hydrant per COC Dtl C-303 Type A and C-305	EA	1
11	Install Tee, Size as Noted	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL03 for Roadway Plan & Profile
3. See Sheet DR06 for Retention Basin Details.
4. See Sheet SL2 & SL3 for Street Lighting Plan.
5. See Sheet PI01 & PI02 for Private Irrigation Plan.

M Match
P Protect
S Sawcut

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ARIZONA811
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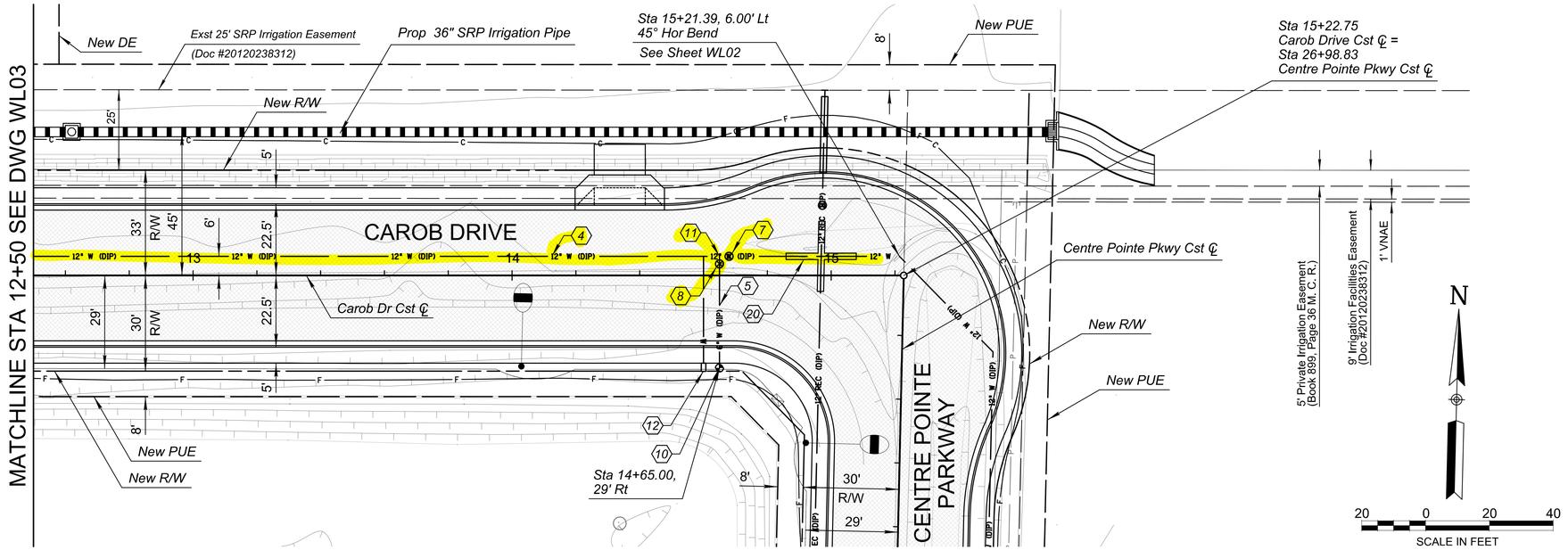
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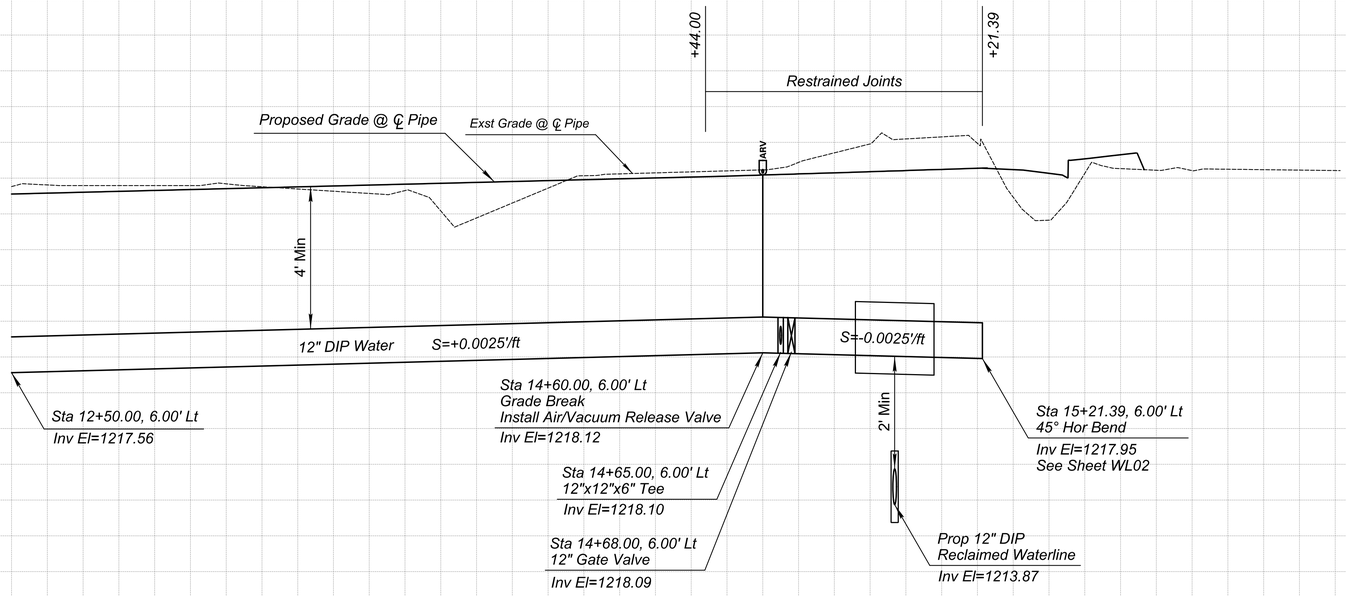
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HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CAROB STREET 12" DIP
WATERLINE PLAN & PROFILE

CITY PROJECT NO.
ST2007.401

DWG. NO.
WL03

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	272
5	Install 6" DIP Waterline per COC Dtl C-308	LF	35
7	Install 12" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
8	Install 6" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
10	Install Fire Hydrant per COC Dtl C-303 Type A and C-305	EA	1
11	Install Tee, Size as Noted	EA	1
12	Install Air/Vacuum Release Valve per COC Dtl C-319	EA	1
20	Concrete Encasement per MAG Dtl 404	LF	22

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL04 for Roadway Plan & Profile
3. See Sheet SL3 for Street Lighting Plan.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

BY	DATE	REVISIONS	No.

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 03/30/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	03/2023

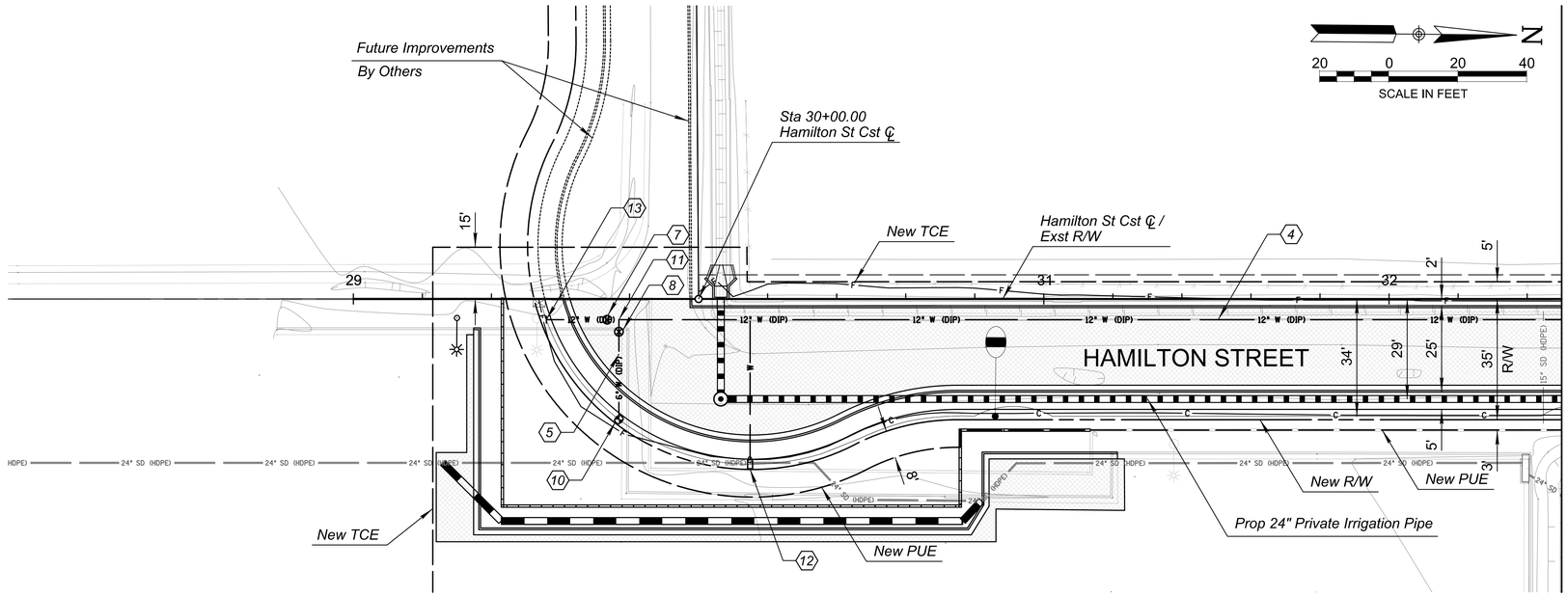
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CAROB STREET 12" DIP WATERLINE PLAN & PROFILE

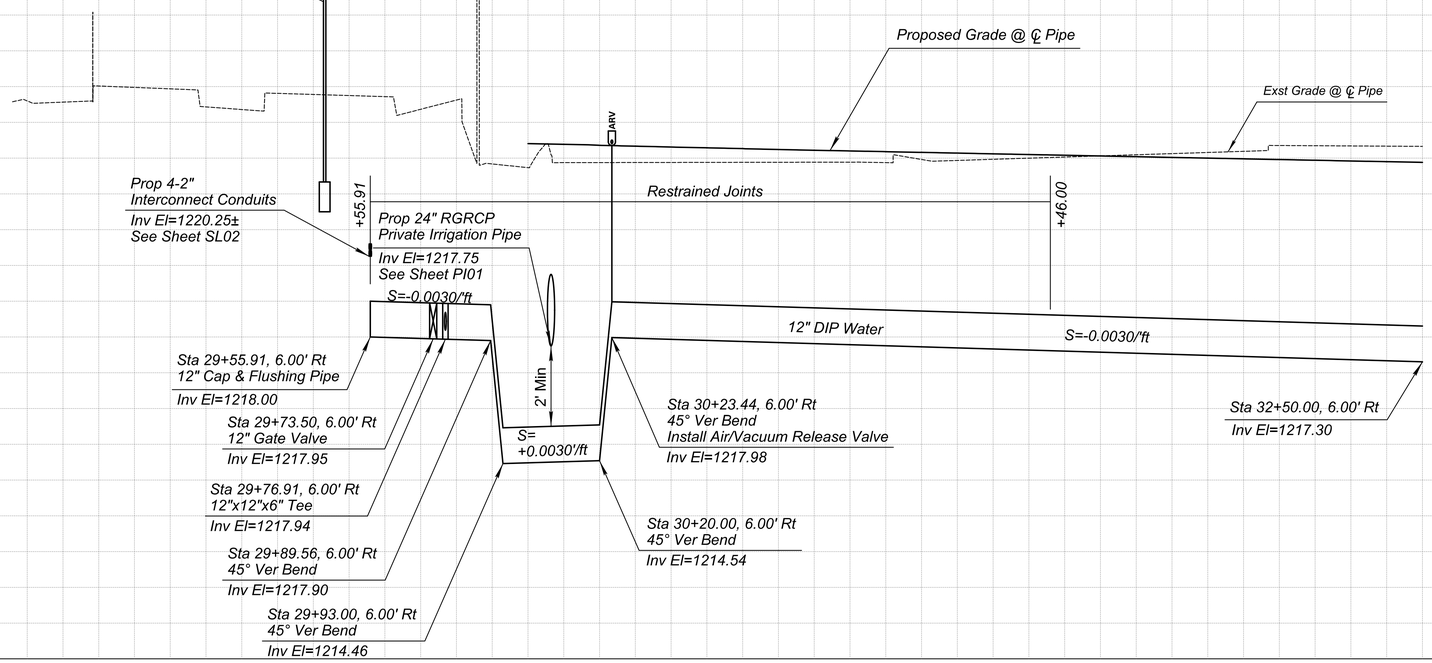
CITY PROJECT NO.
ST2007.401

DWG. NO.
WL04

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	294
5	Install 6" DIP Waterline per COC Dtl C-308	LF	29
7	Install 12" Water Gate Valve per COC Dtl C-307 & C-317	EA	1
8	Install 6" Water Gate Valve per COC Dtl C-307 & C-317	EA	1
10	Install Fire Hydrant per COC Dtl C-303 Type A and C-305	EA	1
11	Install Tee, Size as Noted	EA	1
12	Install Air/Vacuum Release Valve per COC Dtl C-319	EA	1
13	12" Restrained Pipe Cap and Flushing Pipe per COC Dtl C-300	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL05 for Roadway Plan & Profile
3. See Sheet SL2 for Street Lighting Plan.
4. See Sheet PI01 for Private Irrigation Plan.
5. See Sheet PW01 for Privacy Wall Plan.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 3/14/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
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DATE:	03/2023

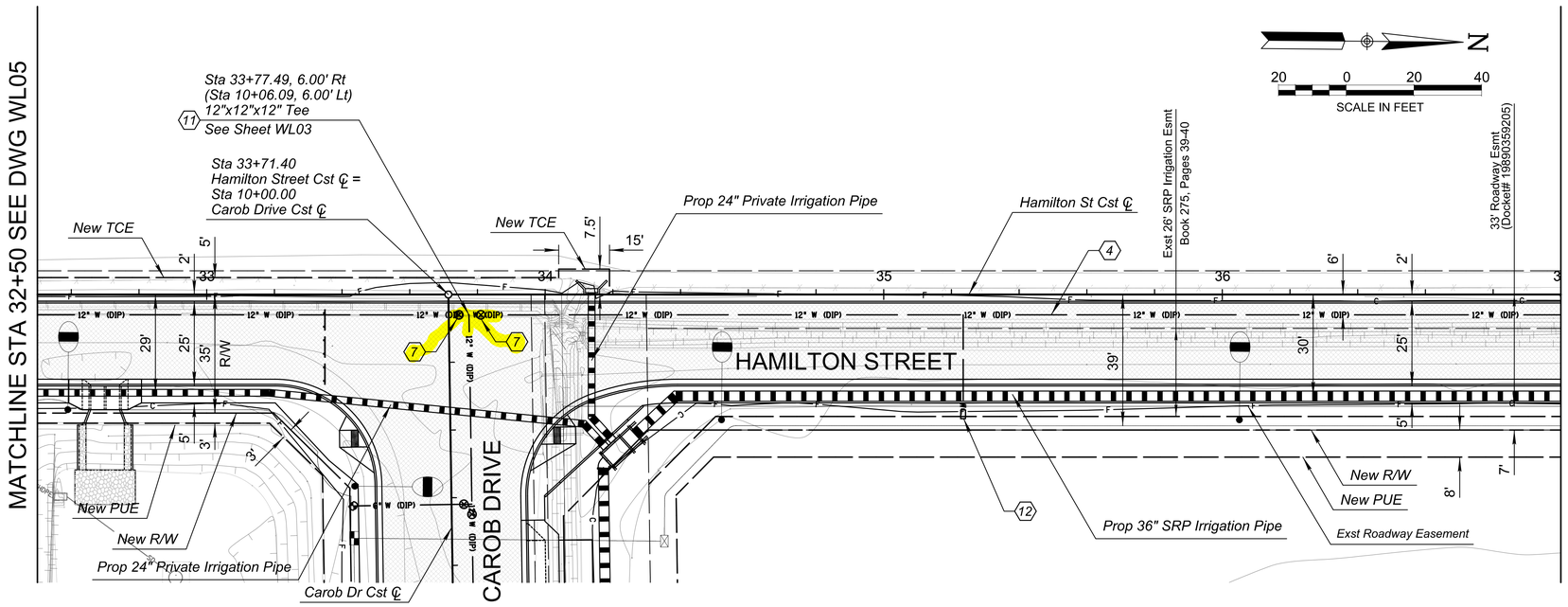
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON STREET 12" DIP WATERLINE PLAN & PROFILE

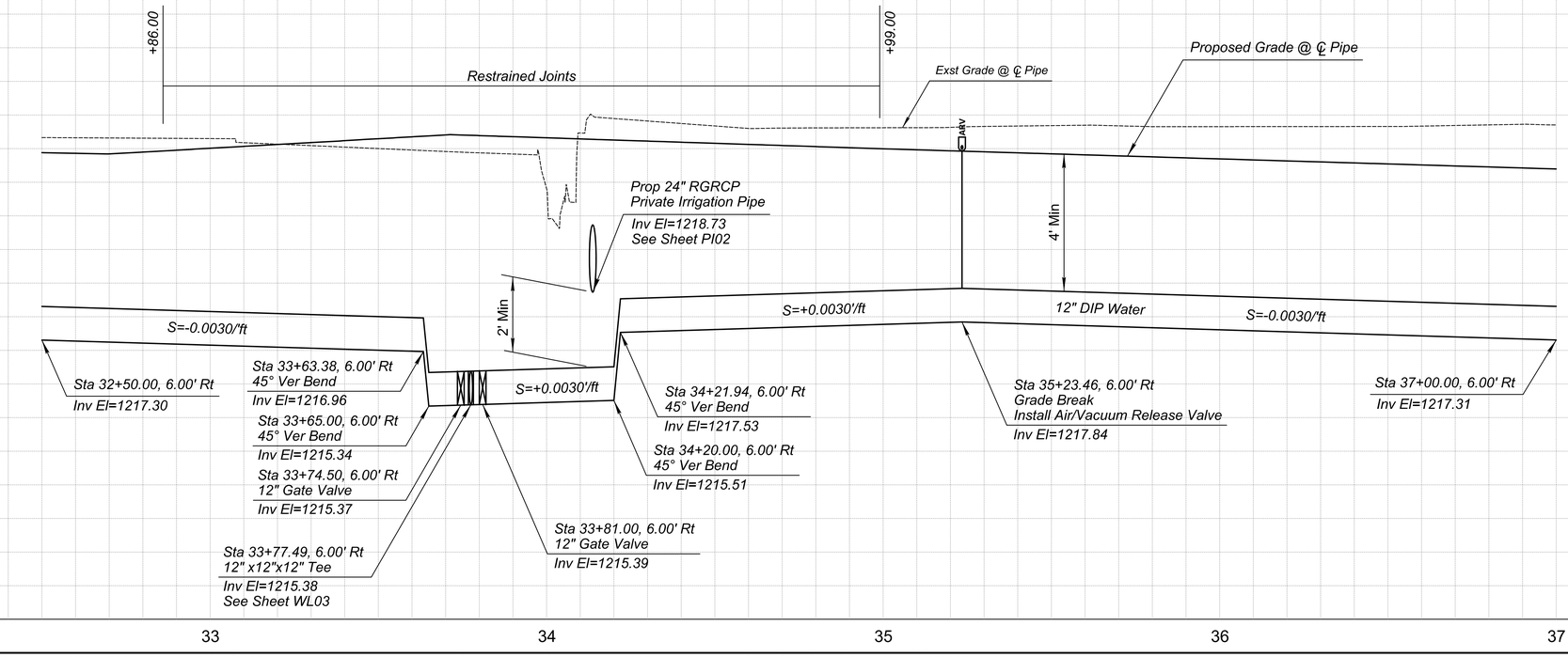
CITY PROJECT NO.
ST2007.401

DWG. NO.
WL05

C.O.C. LOG NO. CV21-0015 HAMILTON STREET IMPROVEMENTS

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	450
7	Install 12" Water Gate Valve per COC Dtl C-307 & C-317	EA	2
11	Install Tee, Size as Noted	EA	1
12	Install Air/Vacuum Release Valve per COC Dtl C-319	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL06 for Roadway Plan & Profile
3. See Sheet SL2 for Street Lighting Plan.
4. See Sheet PI01 & PI02 for Private Irrigation Plan.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

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Phoenix, Arizona 85012

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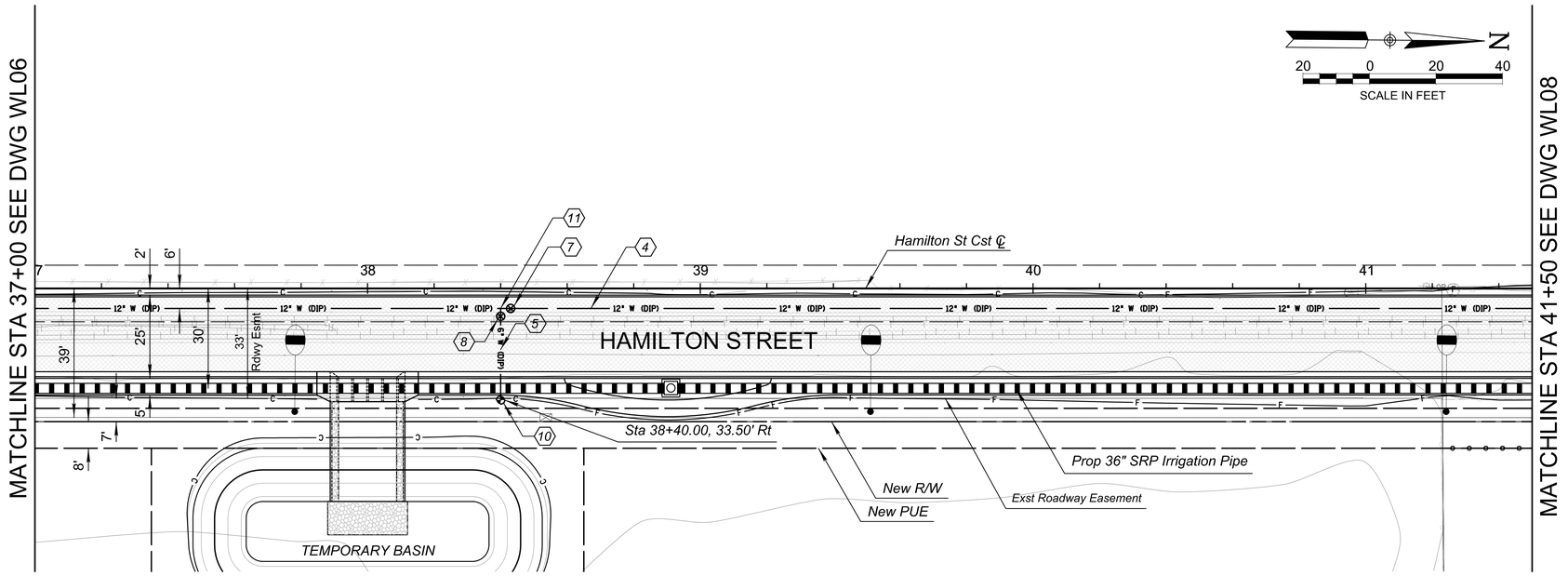
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON STREET 12" DIP WATERLINE PLAN & PROFILE

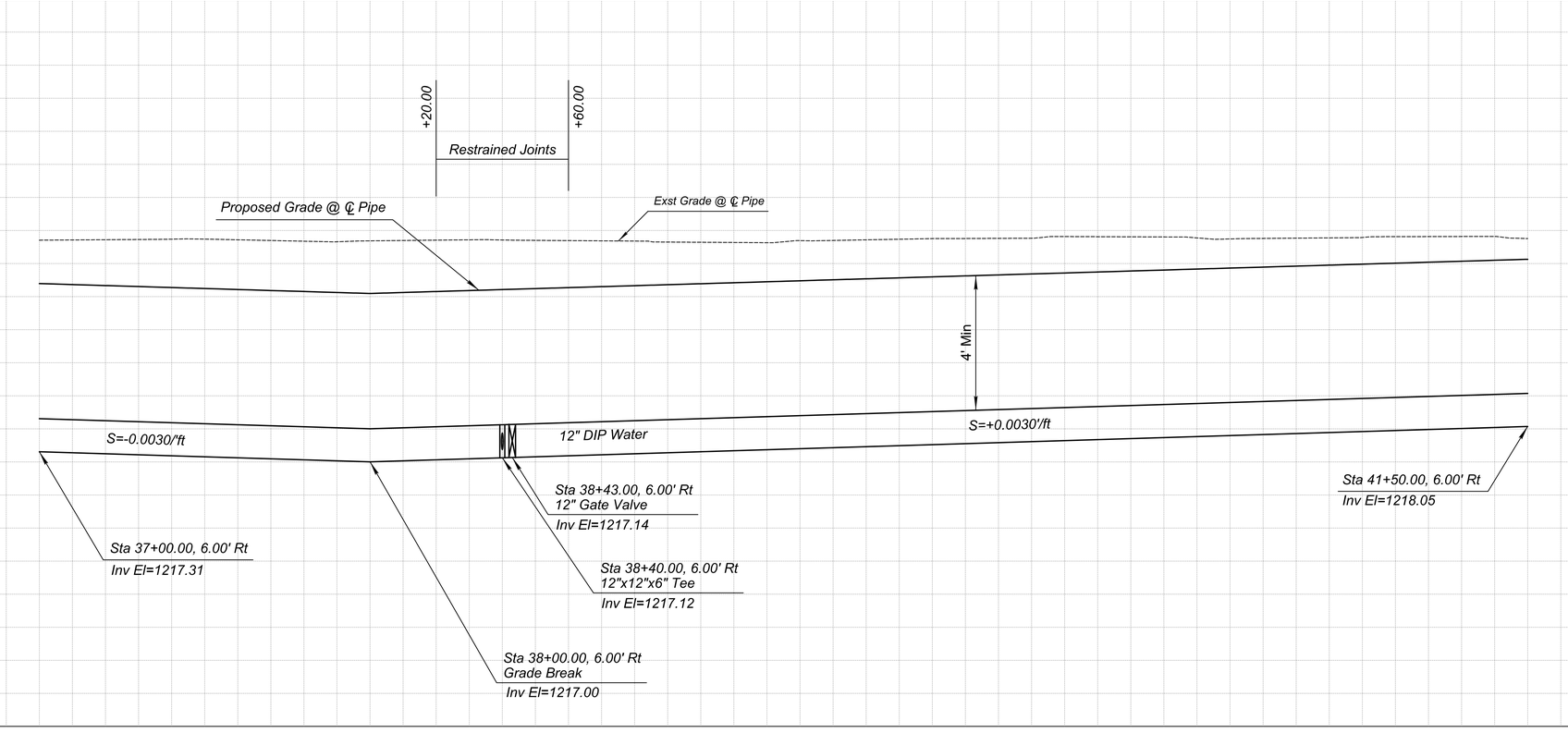
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ST2007.401

DWG. NO.
WL06

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	450
5	Install 6" DIP Waterline per COC Dtl C-308	LF	28
7	Install 12" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
8	Install 6" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
10	Install Fire Hydrant per COC Dtl C-303 Type A and C-305	EA	1
11	Install Tee, Size as Noted	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL07 for Roadway Plan & Profile
3. See Sheet DR07 for Retention Basin Details.
4. See Sheet SL2 for Street Lighting Plan.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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No.	REVISIONS	DATE	BY

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ARIZONA U.S.A.
Expires 06/30/25

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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON STREET 12" DIP WATERLINE PLAN & PROFILE

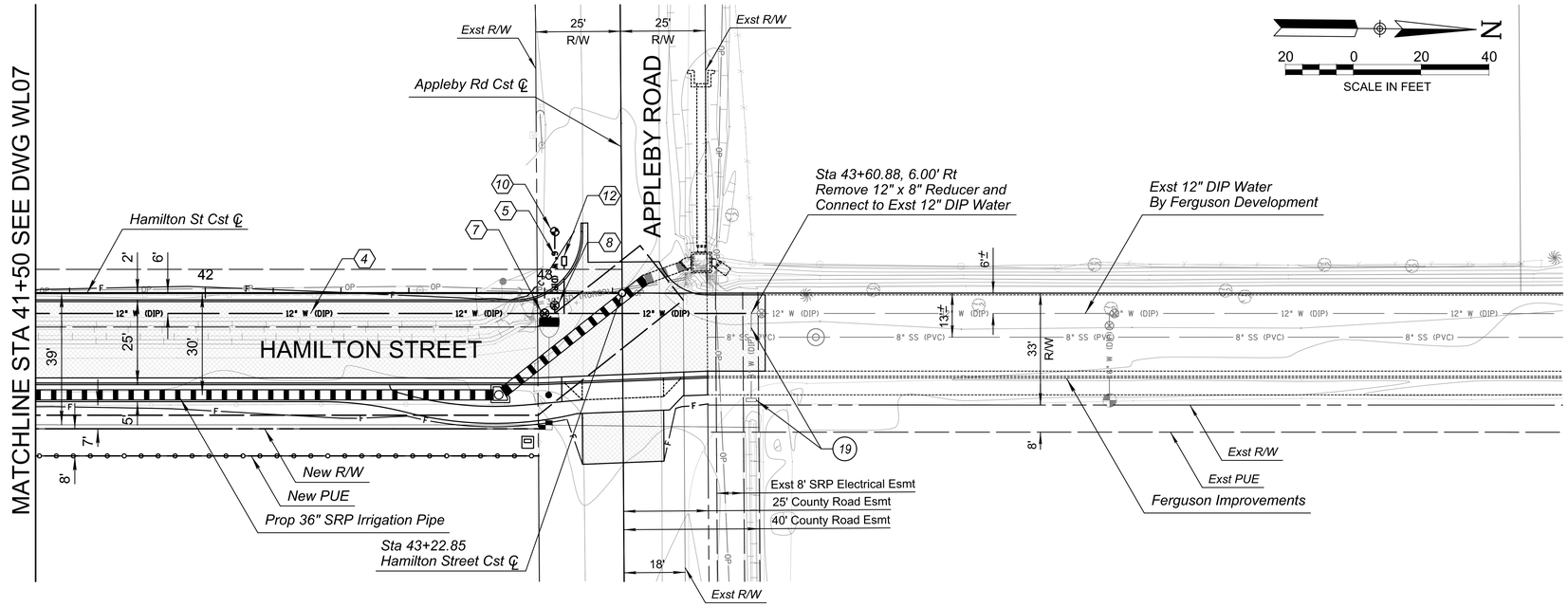
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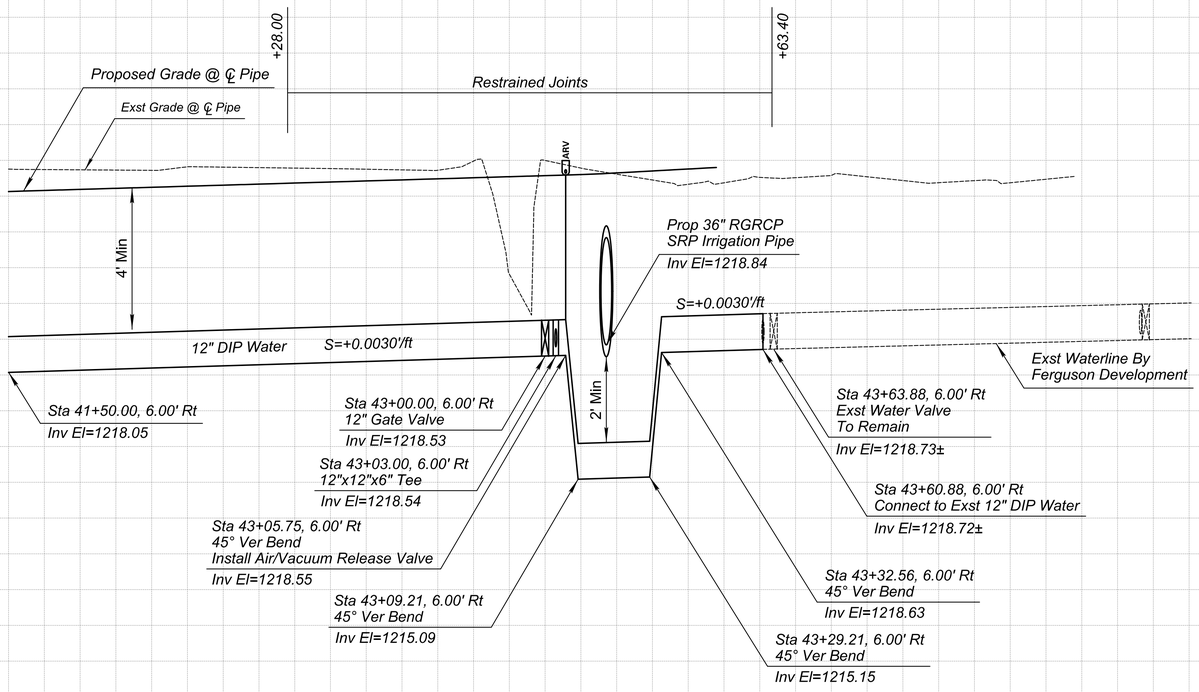
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WL07

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
4	Install 12" DIP Waterline per COC Dtl C-308	LF	211
5	Install 6" DIP Waterline per COC Dtl C-308	LF	24
7	Install 12" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
8	Install 6" Water Gate Valve per COC Dtl C-307 and C-317	EA	1
10	Install Fire Hydrant per COC Dtl C-303 Type A and C-305	EA	1
11	Install Tee, Size as Noted	EA	1
12	Install Air/Vacuum Release Valve per COC Dtl C-319	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
19	Remove 8" DIP, Flushing Pipe Assembly and Fittings	LF	30

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL08 for Roadway Plan & Profile
3. See Sheet SL2 for Street Lighting Plan.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

50900
KEVIN R. THOMAS
Date Signed 03/31/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
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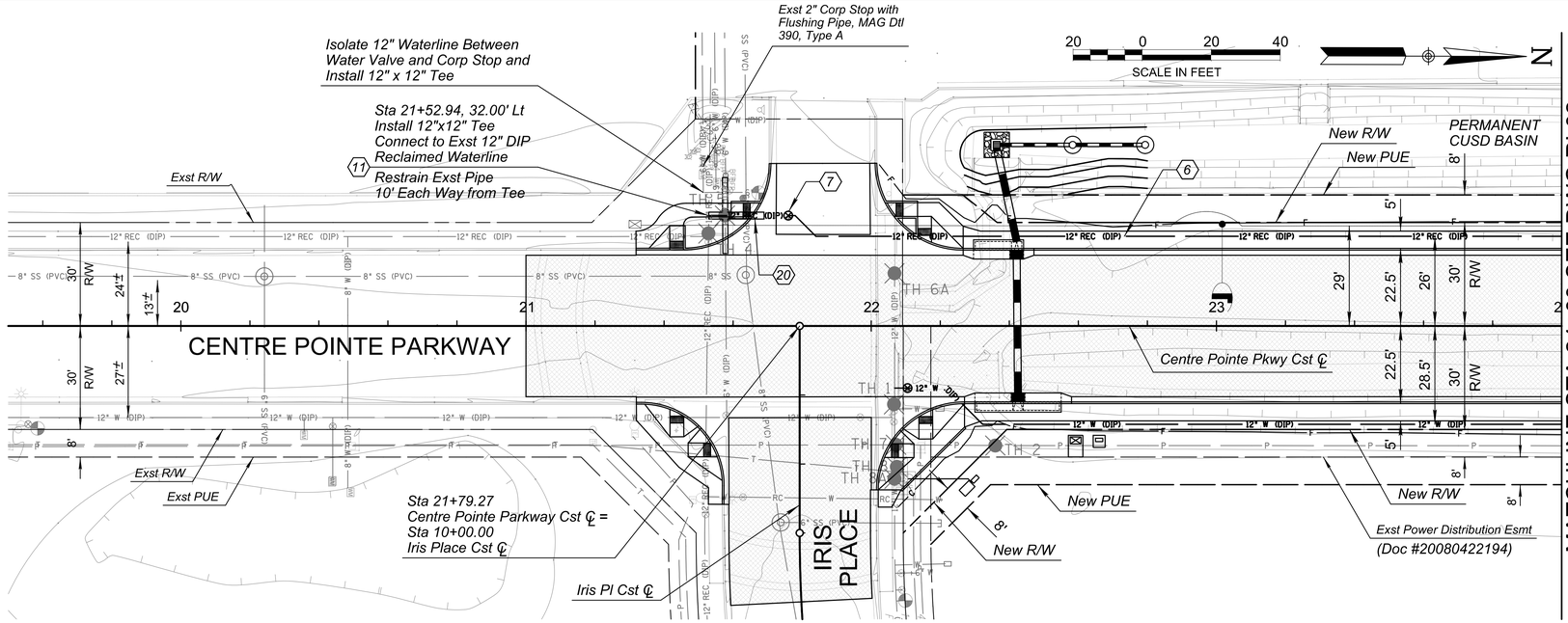
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
HAMILTON STREET 12" DIP
WATERLINE PLAN & PROFILE

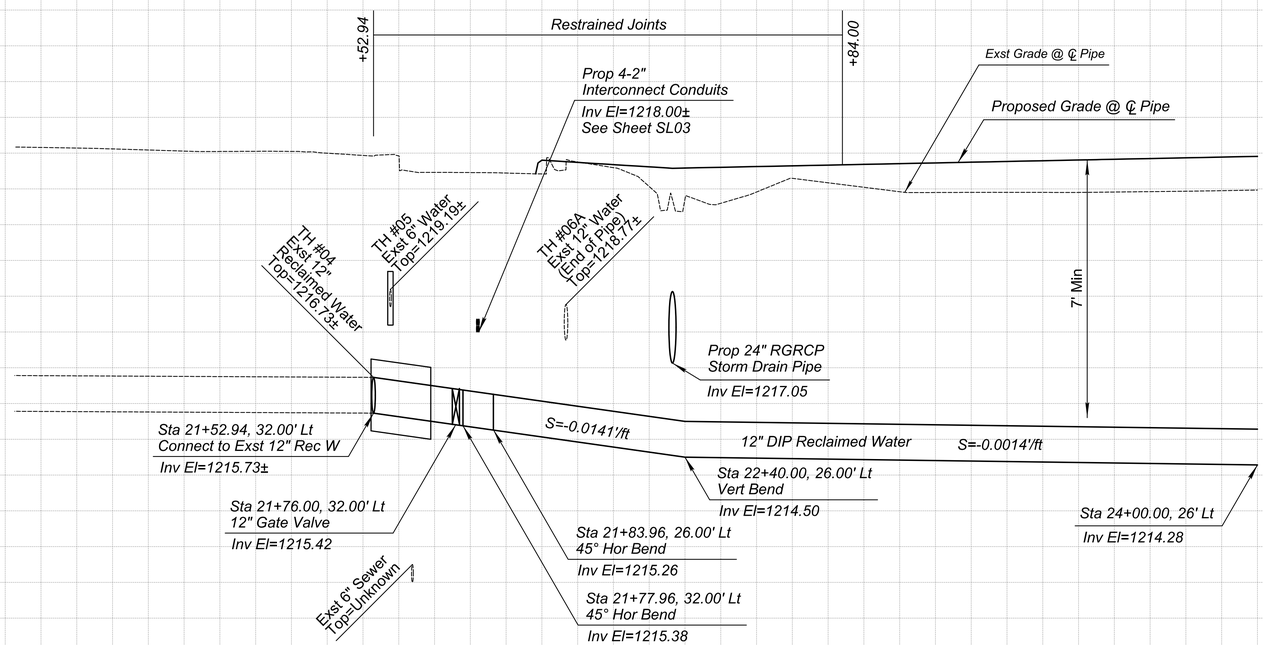
CITY PROJECT NO.
ST2007.401

DWG. NO.
WL08

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
6	Install 12" DIP Reclaimed Waterline per COC Dtl C-408	LF	250
7	Install 12" Reclaimed Water Gate Valve per COC Dtl C-406	EA	1
11	Install Tee, Size as Noted	EA	1
20	Concrete Encasement per MAG Dtl 404	LF	38

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL01 for Roadway Plan & Profile
3. See Sheet DR08 for Storm Drain Plan & Profile.
4. See Sheet SL3 for Street Lighting Plan.
5. See Sheet WL01 for Waterline Plan & Profile.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — 50900 KEVIN R. THOMAS — Date Signed 6/30/23 — ARIZONA U.S.A. — Expires 06/30/25

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SCALE (V):	1"=2'
DESIGNED BY:	KRT
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DATE:	03/2023

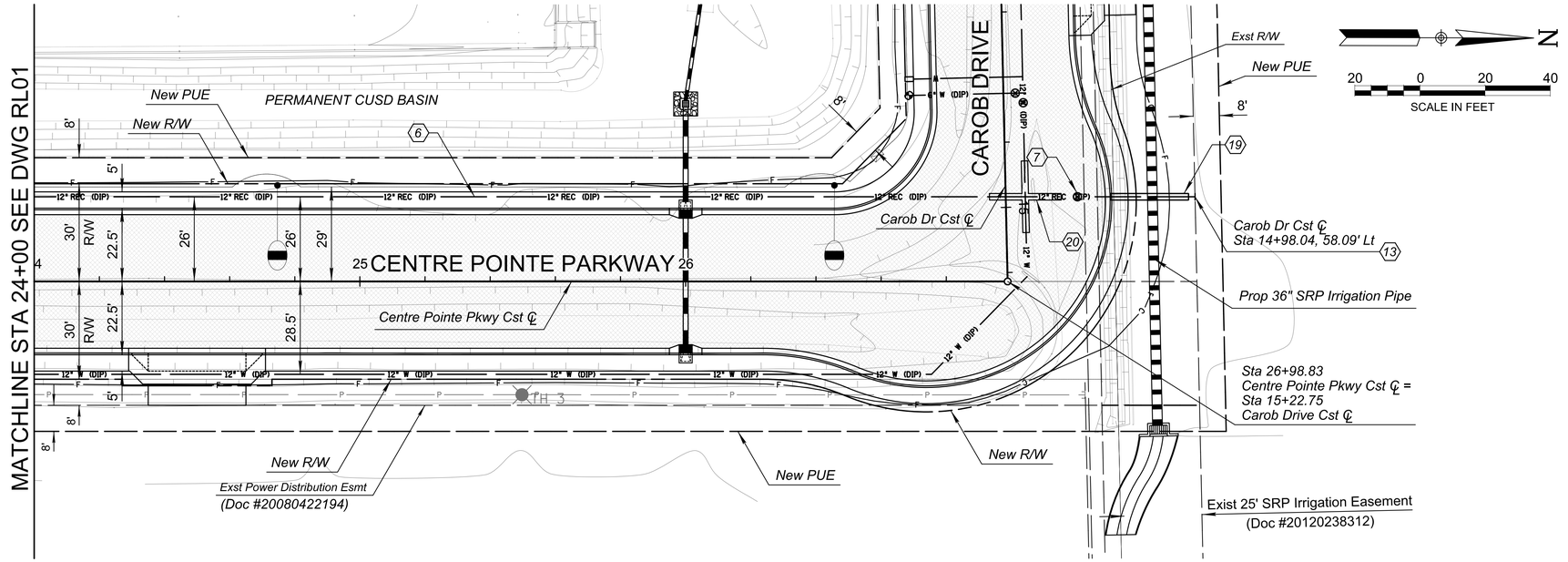
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HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
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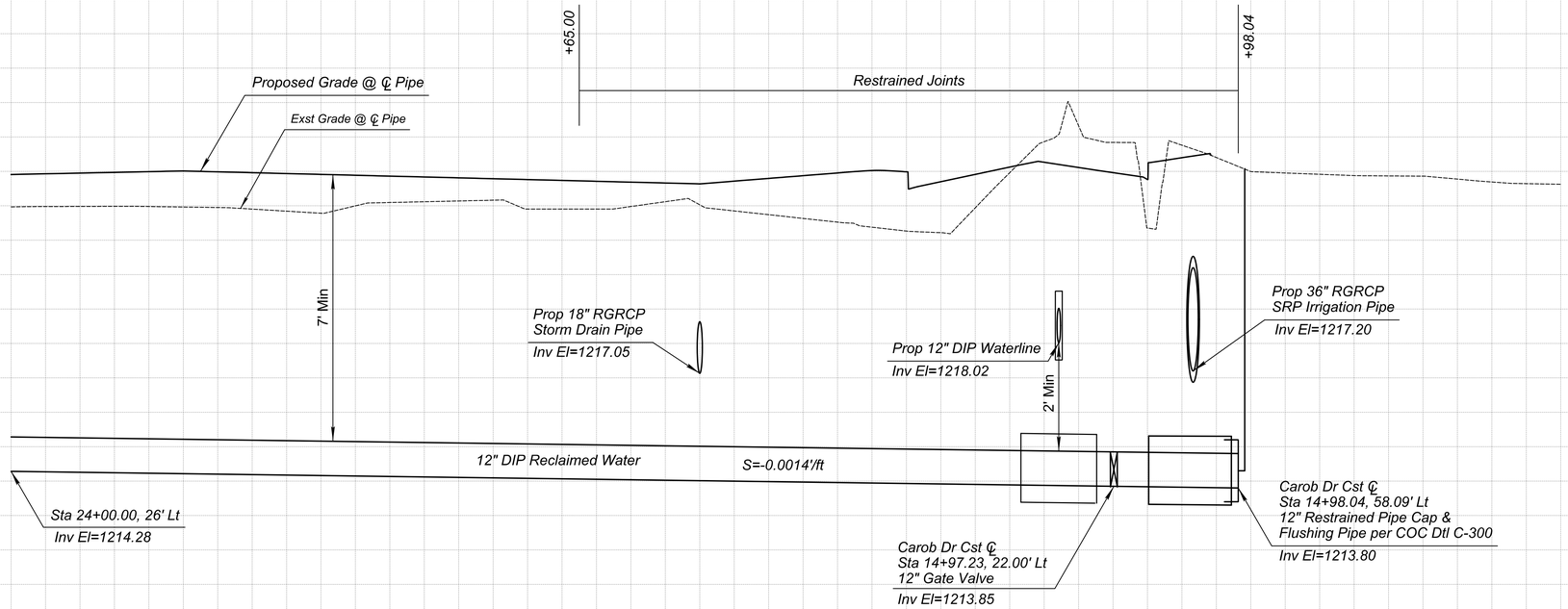
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DWG. NO.
RL01

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
6	Install 12" DIP Reclaimed Waterline per COC Dtl C-408	LF	357
7	Install 12" Reclaimed Water Gate Valve per COC Dtl C-406	EA	1
13	12" Restrained Pipe Cap & Flushing Pipe per COC Dtl C-300	EA	1
19	Install 24" Steel Casing Pipe, Wall Thickness=0.375" See Detail B	LF	24
20	Concrete Encasement per MAG Dtl 404	LF	22

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL02 for Roadway Plan & Profile
3. See Sheet DR08 for Storm Drain Plan & Profile.
4. See Sheet SL3 for Street Lighting Plan.
5. See Sheet WL02 for Waterline Plan & Profile.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 03/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
CENTRE POINTE PKWY 12" DIP RECLAIMED WATER PLAN & PROFILE

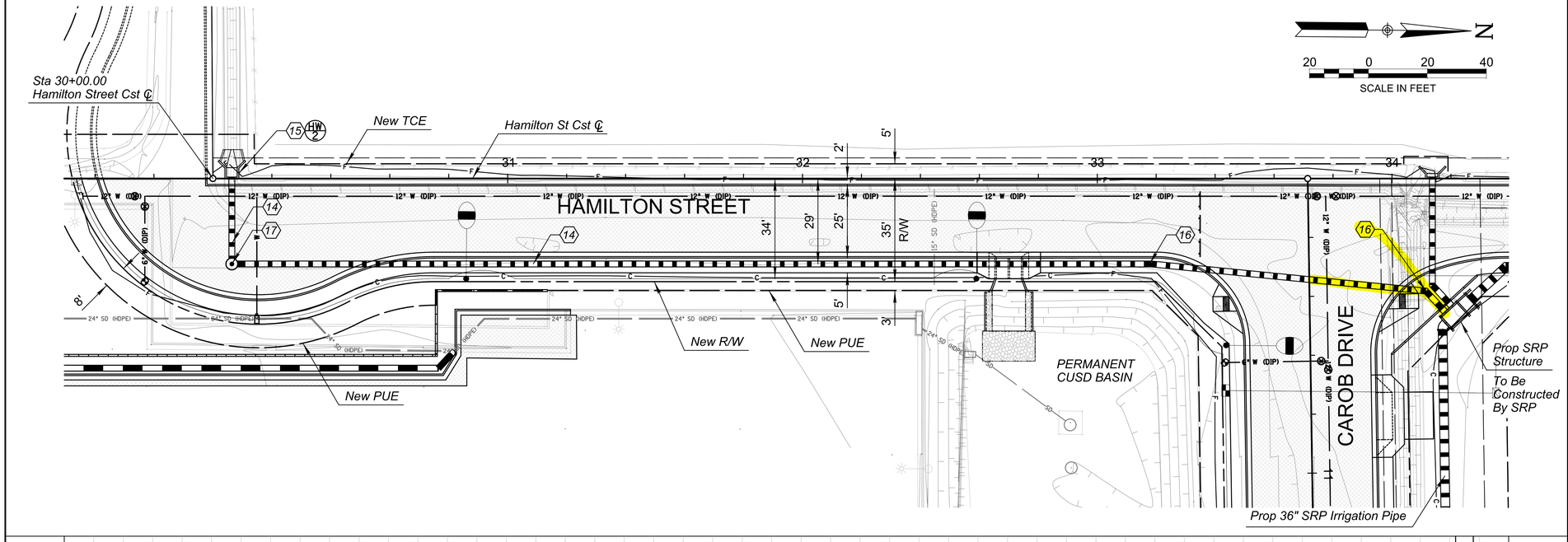
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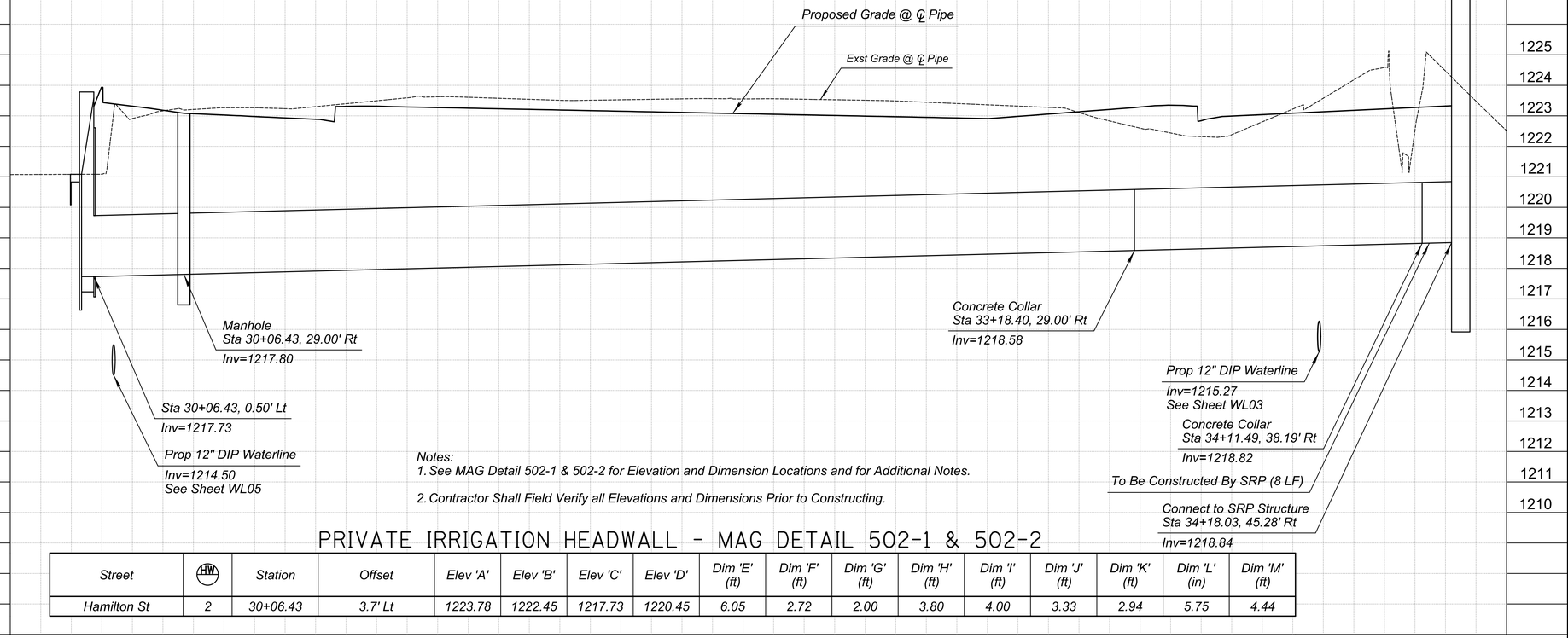
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RL02

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Notes:
1. See MAG Detail 502-1 & 502-2 for Elevation and Dimension Locations and for Additional Notes.
2. Contractor Shall Field Verify all Elevations and Dimensions Prior to Constructing.

PRIVATE IRRIGATION HEADWALL - MAG DETAIL 502-1 & 502-2

Street	HW	Station	Offset	Elev 'A'	Elev 'B'	Elev 'C'	Elev 'D'	Dim 'E' (ft)	Dim 'F' (ft)	Dim 'G' (ft)	Dim 'H' (ft)	Dim 'I' (ft)	Dim 'J' (ft)	Dim 'K' (ft)	Dim 'L' (in)	Dim 'M' (ft)
Hamilton St	2	30+06.43	3.7' Lt	1223.78	1222.45	1217.73	1220.45	6.05	2.72	2.00	3.80	4.00	3.33	2.94	5.75	4.44

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
14	Install 24" RGRCP Irrigation Pipe Class V	LF	431
15	Install Headwall per MAG Dtl 502-1 with Trash Rack	EA	1
16	Construct Concrete Pipe Collar per MAG Dtl 505	EA	2
17	Construct Storm Drain Manhole per MAG Dtl 520 and 522	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL05 & PL06 for Roadway Plan & Profile.
3. See Sheet PW01 for Privacy Wall Plan.
4. See Sheet SL2 for Street Lighting Plan.
5. See Sheet SL2 for Street Lighting Plan.
6. See Sheet WL05 & WL06 for Waterline Plan & Profile.

M Match
P Protect
S Sawcut

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ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

N
20 0 20 40
SCALE IN FEET

NO	DATE	BY	REVISIONS

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/06/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
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CHECKED BY:	RPW
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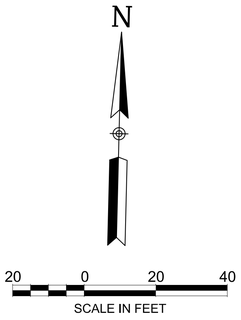
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
PRIVATE IRRIGATION PLAN & PROFILE

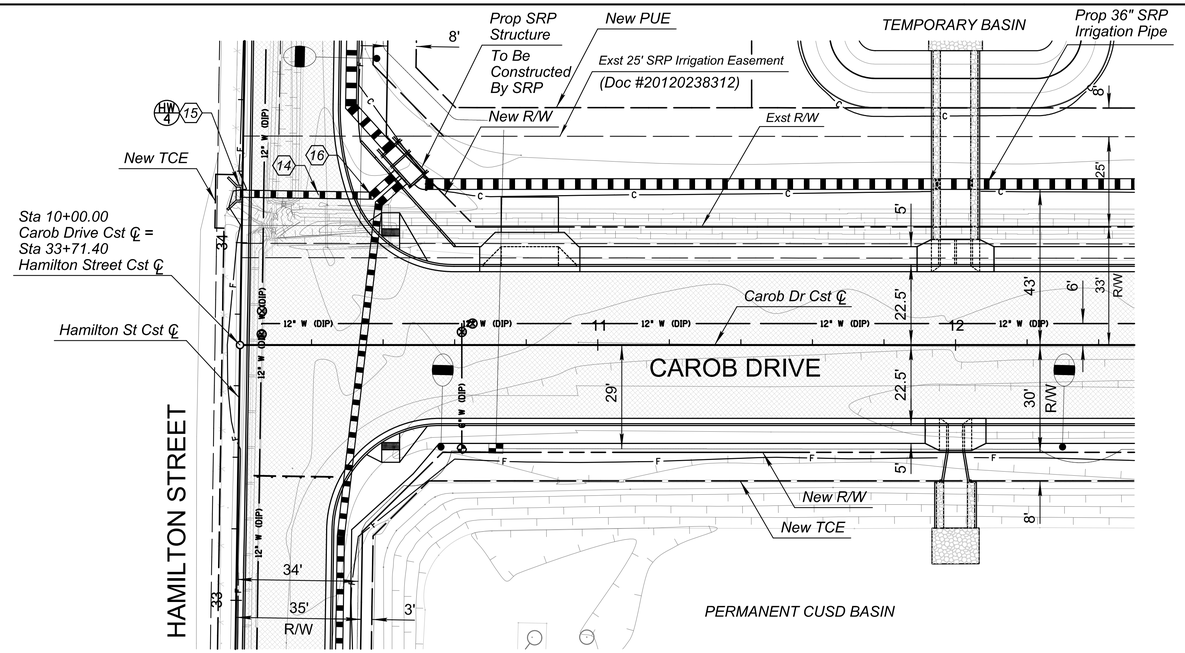
CITY PROJECT NO.
ST2007.401

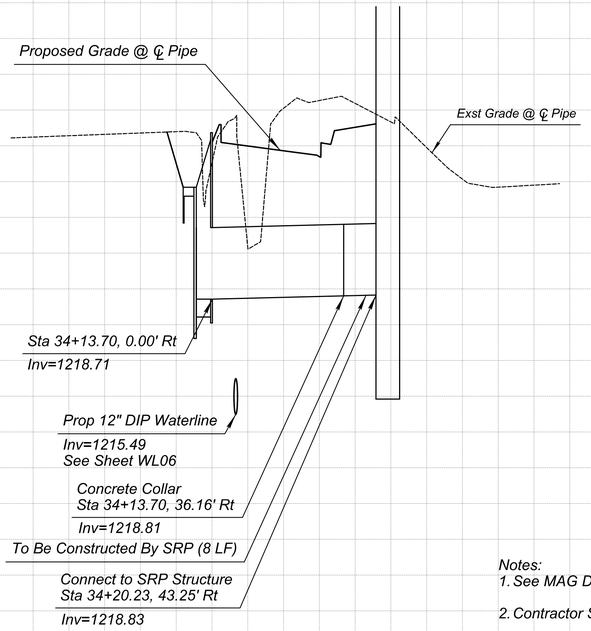
DWG. NO.
PI01

46 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS







Notes:
1. See MAG Detail 502-1 & 502-2 for Elevation and Dimension Locations and for Additional Notes.
2. Contractor Shall Field Verify all Elevations and Dimensions Prior to Constructing.

PRIVATE IRRIGATION HEADWALL - MAG DETAIL 502-1 & 502-2

Street	HW	Station	Offset	Elev 'A'	Elev 'B'	Elev 'C'	Elev 'D'	Dim 'E' (ft)	Dim 'F' (ft)	Dim 'G' (ft)	Dim 'H' (ft)	Dim 'I' (ft)	Dim 'J' (ft)	Dim 'K' (ft)	Dim 'L' (in)	Dim 'M' (ft)
Hamilton St	4	34+13.70	1.7' Lt	1223.37	1222.04	1218.71	1221.84	4.66	3.13	2.00	4.21	4.00	3.33	2.94	5.75	4.44

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
14	Install 24" RGRCP Irrigation Pipe Class V	LF	37
15	Install Headwall per MAG Dtl 502-1 with Trash Rack	EA	1
16	Construct Concrete Pipe Collar per MAG Dtl 505	EA	1

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.
2. See Sheet PL03 for Roadway Plan & Profile.
3. See Sheet SK02 for Staking Plan.
4. See Sheet DR06 for Retention Basin Details.
5. See Sheet SL2 & SL3 for Street Lighting Plan.
6. See Sheet WL06 for Waterline Plan & Profile.
7. See Sheet PI01 for Private Irrigation Plan

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation. ARIZONA811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER 50900 KEVIN R. THOMAS Date Signed 10/03/23 ARIZONA U.S.A. Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

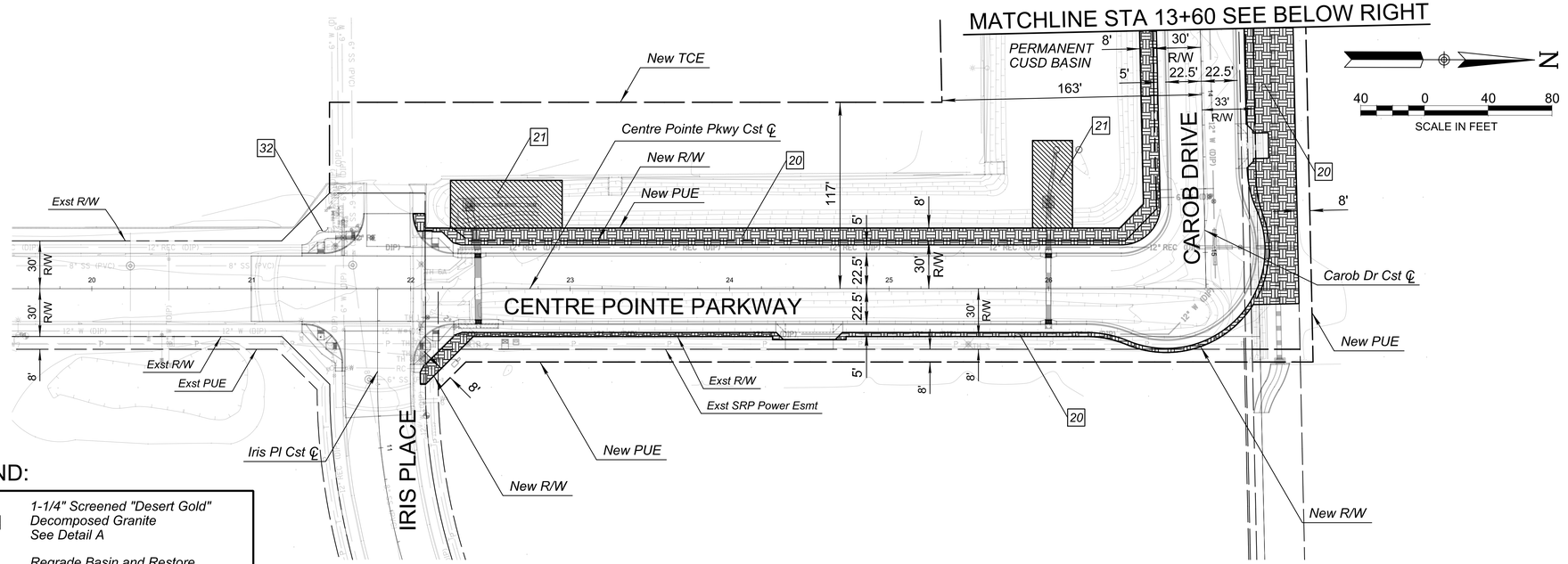
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
PRIVATE IRRIGATION PLAN & PROFILE

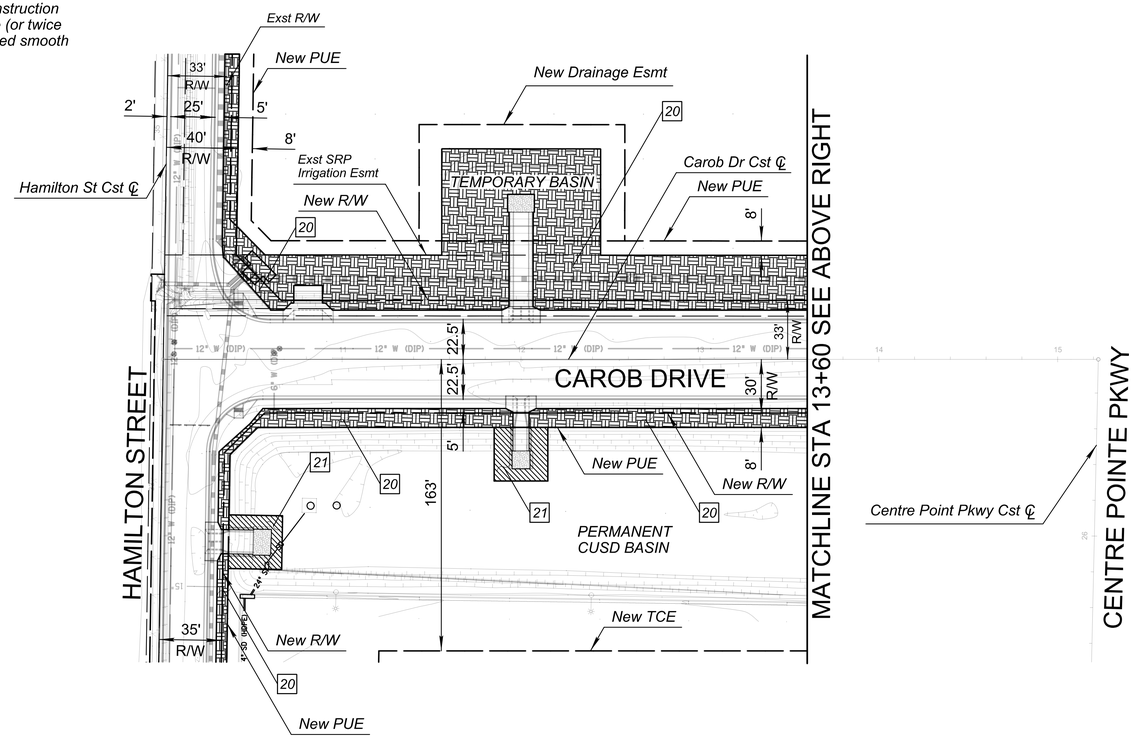
CITY PROJECT NO. ST2007.401

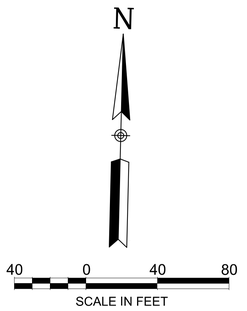
DWG. NO. PI02

47 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS







LEGEND:

- *1-1/4" Screened "Desert Gold" Decomposed Granite See Detail A*
- *Regrade Basin and Restore Decomposed Granite to Match Existing Condition*

All existing landscape areas affected by construction shall have 2" minimum decomposed granite (or twice the size of decomposed granite) and be raked smooth

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
20	*1-1/4" Screened "Desert Gold" Decomposed Granite See Detail A*	SY	3,202
21	*Regrade Basin and Restore Decomposed Granite to Match Exst Condition*	SY	525
32	*Restore Decomposed Granite to Match Exst Condition (Included in Cost for Landscape & Irrigation Restoration)*		

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. *Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.*

M Match
P Protect
S Sawcut

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SCALE (H):	1"=40'
SCALE (V):	N/A
DESIGNED BY:	KRT
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DATE:	10/2023

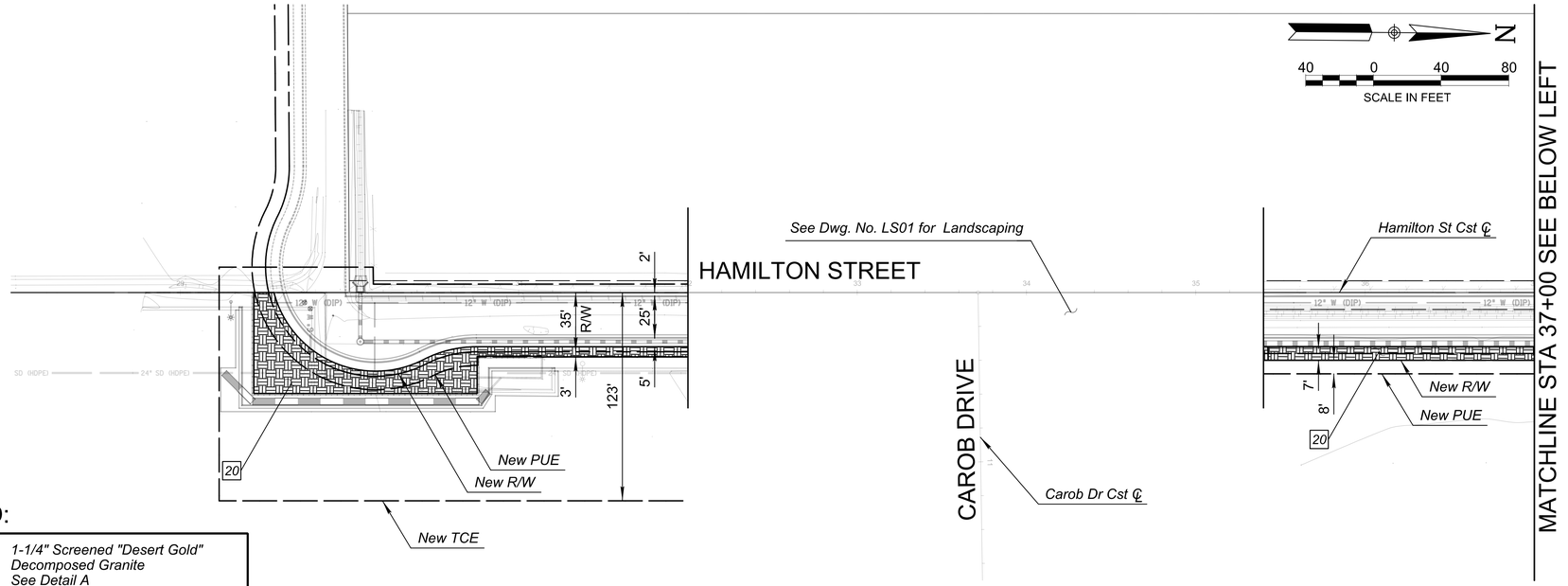
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
DECOMPOSED GRANITE PLAN SHEET

CITY PROJECT NO. ST2007.401

DWG. NO. DG01

48 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



LEGEND:

- *1-1/4" Screened "Desert Gold" Decomposed Granite See Detail A*
- *Regrade Basin and Restore Decomposed Granite to Match Existing Condition*

All existing landscape areas affected by construction shall have 2" minimum decomposed granite (or twice the size of decomposed granite) and be raked smooth

CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
20	*1-1/4" Screened "Desert Gold" Decomposed Granite See Detail A*	SY	1,772

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
DECOMPOSED GRANITE PLAN SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
DG02

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CITY OF CHANDLER LANDSCAPE GENERAL NOTES:

1. ALL TREES WITHIN VEHICULAR SIGHT DISTANCE/VISIBILITY CLEAR ZONES SHALL HAVE A VERTICAL CANOPY CLEARANCE/CLEAR TRUNK TO 6' ABOVE THE NEAREST CURB ELEVATION, ALL SHRUBS IN THIS AREA MAY NOT REACH A MATURE HEIGHT OVER 24". E AND DSM CHAPTER 8, SECTION 8.4.3.3
2. TREES MUST MAINTAIN A MINIMUM 6' SETBACK FROM THE FACE OF CURB (IN AREAS EFFECTED BY FUTURE TURN LANES, TREES MAY BE PLACED NO LESS THAN 4' FROM FACE OF CURB). E AND DSM CHAPTER 8, SECTION 8.4.3.4
3. THE LANDSCAPE WILL BE MAINTAINED BY THE DEVELOPER OR CONTRACTOR FOR A PERIOD OF NINETY (90) DAYS FOLLOWING A PRELIMINARY INSPECTION AND ACCEPTANCE BY THE CITY. IF NOT HEALTHY AT THE END OF THE MAINTENANCE PERIOD, THE MAINTENANCE SHALL BE CONTINUED UNTIL THE PLANT MATERIAL IS APPROVED BY THE CITY. E AND DSM CHAPTER 8, SECTION 8.2.3.7
4. THE DEVELOPER OF CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OR REPLACEMENTS. E AND DSM CHAPTER 8, SECTION 8.2.3.7
5. ALL ROCK GROUNDCOVER AREAS SHALL BE SPRAYED WITH PRE-EMERGENT HERBICIDE BY A LICENSED APPLICATOR AS PART OF INSTALLATION AS FOLLOWS (A MINIMUM OF THREE (3) APPLICATION ARE REQUIRED):
   · PRIOR TO THE APPLICATION OF GRANITE: 1/2 GALLON PER ACRE
   · AFTER GRANITE APPLICATION: 1/2 GALLON PER ACRE
   · PRIOR TO FINAL ACCEPTANCE: 1 GALLON PER ACRE

* THE CITY SHALL BE FURNISHED WITH WRITTEN DOCUMENTATION OF APPLICATORS LICENSE, ALL MATERIALS USED, APPLICATION RATES, AND THE SCHEDULE DATES FOR APPLICATION PRIOR TO THE START OF ANY APPLICATIONS (SPRAY LOGS). E AND DSM CHAPTER 8, SECTION 8.2.4.2

6. INSPECTIONS: THE CITY'S CIVIL ENGINEERING OFFSITE INSPECTIONS GROUP WILL INSPECT AND APPROVE THE WORK AT THE FOLLOWING STAGES OF COMPLETION. ANY WORK COMPLETED WITHOUT THESE INSPECTIONS MUST BE REMOVED PRIOR TO ACCEPTANCE OF THAT PHASE OF WORK. THESE STAGES ARE:
   · COMPLETION OF ALL TRENCHING AND INSTALLATION OF ALL MAIN LINES PRIOR TO BACK FILLING, INCLUDING THE VACUUM BREAKER, QUICK COUPLERS, ELECTRIC VALVES AND ANY ISOLATION VALVES. THE MAIN LINE SHALL BE PRESSURE TESTED FOR THIRTY (30) MINUTES AT THIS INSPECTION.
   · COMPLETION OF INSTALLATION OF ALL CONTROL WIRES PRIOR TO BACKFILLING.
   · INSTALLATION OF ALL LATERAL VALVES, LINES, AND HEADS PRIOR TO BACKFILLING. E AND DSM CHAPTER 8, SECTION 8.2.11.14
7. PRIOR TO ANY CONSTRUCTION OF UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH WILL AFFECT EXISTING CITY-OWNED AND MAINTAINED LANDSCAPE OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTIONING. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. E AND DSM CHAPTER 8, SECTION 8.2.11.14
8. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR UTILITY COMPANY AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHO SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE : A REPRESENTATIVE FROM THE CONTRACTOR, A REPRESENTATIVE FROM THE ENGINEERING FIRM OR PERSON RESPONSIBLE FOR THE CONSTRUCTION INSPECTION AND A REPRESENTATIVE FROM THE CITY STREET DEPARTMENT INSPECTION GROUP. SECTION 2.11.11
9. ALL LANDSCAPE AREAS SHALL BE GRADED SO THAT FINISHED GRADE SURFACE OF ALL NONLIVING MATERIAL (i.e. DECOMPOSED GRANITE, CRUSHED ROCK, MULCH, ETC.) ARE ONE AND ONE HALF (1 AND 1/2) INCHES BELOW CONCRETE OR OTHER PAVED SURFACES. E AND DSM CHAPTER 8, SECTION 8.2.9

LANDSCAPE & IRRIGATION GENERAL NOTES:

1. THE JOB SITE, AT THE COMPLETION OF THE CONSTRUCTION, SHALL BE CLEANED OF ANY DEBRIS OR SPOIL RESULTING FROM THE CONSTRUCTION. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT, AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS, AND ALL SURVEY MONUMENTS ARE INSTALLED ACCORDING TO THE PLANS AND CITY SPECIFICATIONS.
2. ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED ON THE PLANS OR IN THE SPECIFICATIONS BUT WHICH ARE REQUIRED TO COMPLETE THIS INSTALLATION, SHALL BE SUPPLIED BY THE CONTRACTOR AS PART OF THIS CONTRACT WORK.
3. ALL FRAMES, COVERS, VALVE BOXES, ETC., SHALL BE ADJUSTED TO FINISHED GRADE AFTER PLACING OF PAVEMENT OR PLANTING BEDS BY THE CONTRACTOR PER THESE PLANS AND SPECIFICATIONS.
4. ALL LANDSCAPE AND IRRIGATION MATERIALS AND INSTALLATION SHALL COMPLY WITH ADOT SPECIFICATIONS AND THESE SPECIFICATIONS.
5. THE CITY OF CHANDLER REQUIRES THAT ANY EXISTING BACK FLOW PREVENTION ASSEMBLIES SHALL BE TESTED AND APPROVED BY A CHANDLER CERTIFIED TECHNICIAN PRIOR TO CONNECTION AND THE REQUEST FOR FINAL INSPECTION.
6. LANDSCAPE REMOVAL IS A NON PAY ITEM (N.P.I.) AND THE COST FOR VEGETATIVE REMOVAL SHOULD BE INCLUDED IN SITE PREPARATION WORK ASSOCIATED WITH EACH ITEM OF WORK.
7. ALL EXISTING TREES AND SHRUBS UNLESS NOTED ARE TO BE PROTECTED IN PLACE. THE REMAINDER OF EXISTING VEGETATION (WEEDS, ETC.) UNLESS NOTED OTHERWISE SHALL BE REMOVED AND DISPOSED OF AS PART OF THE DEMOLITION PHASE OF THIS CONTRACT (NPI). ALL MATERIALS ARE TO BE REMOVED FROM PROJECT AREA AND DISPOSED OF PROPERLY OFF-SITE AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE NOTED. (COMPACT THOSE AREAS DESIGNATED FOR PAVEMENT TO 95% OR AS SPECIFIED IN THE SOILS REPORT AND SCARIFY EXISTING SUBGRADE A MINIMUM OF 6-INCH DEPTH IN AREAS TO BE PLANTED).
8. ALL PLANT MATERIAL, OTHER THAN TREES, SHALL CONFORM TO GRADING, TYPE, ETC., AS SET FORTH IN "THE AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL TREES SHALL CONFORM TO THE CURRENT "ARIZONA NURSERY ASSOCIATION TREE SPECIFICATIONS" AND M.A.G. SPEC 795.7. SHOULD ANY CONFLICTS IN SPECIFICATIONS OCCUR, THE ARIZONA NURSERY ASSOCIATION'S SPECIFICATIONS SHALL PREVAIL.
9. ENGINEER RESERVES THE RIGHT TO INSPECT SHRUBS AND CONTAINERED TREES FOR CONDITION OF ROOT BALLS. FOR ANY SUCH INSPECTION WHICH MAY DESTROY ROOT BALL, CONTRACTOR SHALL SUPPLY ADDITIONAL PLANTS AT NO COST TO THE CITY.
10. THE CONTRACTOR SHALL HAVE THE PLANT PITS INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLANTING. CONTRACTOR SHALL REQUEST INSPECTION 48 HOURS IN ADVANCE.
11. PLANT PIT SOIL MIXTURE SHALL CONSIST OF EQUAL PARTS NATIVE TOPSOIL, NITROLIZED HUMUS AND SAND BY VOLUME, THOROUGHLY MIXED PRIOR TO BACK FILLING IN PITS. BACK FILLING SHALL BE IN 6-INCH LIFTS. EACH LIFT SHALL BE WATER SETTLED, WITHOUT PUDDLING.
12. CONTRACTOR SHALL STAKE TREE AND SHRUB LOCATIONS FOR 5-GALLON PLANTS AND LARGER, AND HAVE LOCATIONS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. STAKES SHALL BE MARKED WITH PLANT NAME OR PLANT LEGEND ITEM NUMBER FROM PLANS.
13. CONTRACTOR SHALL INSTALL D.G. IN PLANTING BEDS AS FOLLOWS: DECOMPOSED GRANITE GROUND COVER SHALL BE DESERT GOLD WITH GRADATIONS AS NOTED PER THESE PLANS AND SPECIAL PROVISIONS. PLACE AND ROLL TO 2" TOTAL DEPTH OVER 85% COMPACTED SUBGRADE. AN APPROVED PRE-EMERGENT HERBICIDE SHALL BE APPLIED AS DIRECTED BY THE ENGINEER IN THREE SEPARATE APPLICATIONS AS DIRECTED BY A REPRESENTATIVE OF THE CITY OF CHANDLER DURING PLACEMENT OF DECOMPOSED GRANITE. SAMPLES OF D.G. ARE TO BE PROVIDED TO THE ENGINEER FOR REVIEW & APPROVAL PRIOR TO PLACEMENT.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE JOB SITE TO COME FAMILIAR WITH ALL EXISTING CONDITIONS THAT COULD AFFECT THE INSTALLATION OF ANY WORK SET FORTH IN THESE PLANS PRIOR TO SUBMITTING A BID.
15. THE CONTRACTOR IS ADVISED THAT DAMAGE TO ANY PORTION OF THIS PROJECT'S EXISTING PAVEMENT, CURBING AND SURROUNDING AREA THAT IS NOT NOTED ON THE PLANS TO BE REMOVED, AS A RESULT OF THIS PROJECT, IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY DEBRIS RESULTING FROM THE DEMOLITION AND CONSTRUCTION. AT NO TIME SHALL ANY OF THIS MATERIAL OBSTRUCT THE NORMAL OPERATION OF ANY ADJOINING STREET OR ANY AREAS ASSOCIATED WITH THIS PROJECT.
17. WATER TEST EACH TREE PIT FOR DRAINAGE BY FILLING THE HOLES TWICE IN SUCCESSION WITH WATER. IF WHEN FILLED WITH WATER THE SECOND TIME THE PIT FAILS TO DRAIN WITHIN 24 HOURS, THEN ADDITIONAL EXCAVATION IS NECESSARY TO BREAK THROUGH THE IMPERMEABLE LAYER OR PROVIDE A THICK UNDER LAYER OF SAND BELOW THE ROOT BALL. THE COST FOR OVER EXCAVATION AND FOR THE INSTALLATION OF A DRAINAGE CHIMNEY WILL BE CONSIDERED SHOULD THE TREE PIT NOT DRAIN.
18. WHERE CALICHE IS ENCOUNTERED IN PLANT PITS, DEPTH AND WIDTH OF PIT SHALL BE INCREASED BY ONE-THIRD (1/3) OVER SPECIFICATION, AND CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR A 3' DEEP, 4" DIAMETER DRAINAGE CHIMNEY INSTALLED INTO PLANT PIT FOR LANDSCAPE ARCHITECT AND CITY APPROVAL TO MITIGATE DRAINAGE ISSUES CAUSED BY CALICHE.
19. PROJECT RECORD (AS-BUILT) DRAWINGS FOR IRRIGATION SYSTEM:
   A. MAINTAIN ON-SITE AND SEPARATE FROM DOCUMENTS USED FOR CONSTRUCTION, ONE COMPLETE SET OF CONTRACT DOCUMENTS AS PROJECT DOCUMENTS. KEEP DOCUMENTS CURRENT. DO NOT PERMANENTLY COVER WORK UNTIL AS-BUILT INFORMATION IS RECORDED. RECORD ACCURATE REFERENCE DIMENSIONS, MEASURED FROM AT LEAST TWO PERMANENT REFERENCE POINTS, OF EACH IRRIGATION SYSTEM VALVE, EACH BACKFLOW PREVENTION DEVICE, EACH CONTROLLER OR CONTROLLER UNIT, EACH SLEEVE END, EACH STUB-OUT FOR FUTURE PIPE OR WIRING CONNECTIONS,
20. QUANTITIES ARE GIVEN ONLY FOR REFERENCE PURPOSES. CONTRACTOR TO VERIFY ALL LANDSCAPE QUANTITIES AND REPORT ANY DISCREPANCIES IMMEDIATELY. IN CASE OF A DISCREPANCY BETWEEN THE NUMBER OF PLANTS OF ANY SPECIES QUANTITIES OF TURF, RIVER RUN ROCK, DECOMPOSED GRANITE, CONC. HEADER AND ALL OTHER MATERIALS INDICATED ON THE DRAWINGS AND THE TOTAL NUMBER INDICATED ON THE MATERIALS LIST OR BID TAB, THE DRAWINGS SHALL BE ACCEPTED AS CORRECT.
21. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL EXISTING AND PROPOSED UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO STARTING ANY WORK. REPORT IMMEDIATELY TO THE OWNER ANY CASES WHERE PLANT MATERIAL SHALL BE RELOCATED TO AVOID THE UTILITIES. DAMAGE BY THE CONTRACTOR TO ANY WORK SHALL BE REPLACED AND/OR REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE.
22. ALL LANDSCAPE AREAS SHALL HAVE AN APPLIED TOPPING OF DECOMPOSED GRANITE. FINISH GRADE AREAS ARE TO BE RAKED AND COMPACTED AS SPECIFIED IN MAG SECTIONS 430 AND LEFT SMOOTH AND EVEN WITH FINISH GRADE BELOW ALL STRUCTURES. PLANTED AREAS SHALL BE BELOW ALL ADJACENT CURBS, WALKS, AND PAVING. NON-PLANTED AREAS SHALL BE BELOW ALL ADJACENT CURBS AND WALKS. SAMPLES OF D.G. ARE TO BE PROVIDED TO THE CITY OF CHANDLER FOR REVIEW & APPROVAL PRIOR TO PLACEMENT.
23. FOR SITE OBSERVATIONS CONDUCTED DURING THE CONSTRUCTION PHASE OF PROJECT REFER TO THESE PLANS AND SPECIAL PROVISIONS.
24. FOR ADDITIONAL CONSTRUCTION NOTES REFER TO LANDSCAPE ARCHITECTURE AND IRRIGATION PLANS AND THE SPECIFICATIONS.
25. WORK INCLUDED: WORK UNDER THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NEW AUTOMATIC DRIP/SPRAY IRRIGATION SYSTEM COMPLETE, INCLUDING, AS INDICATED ON THE PLANS AND DESCRIBED IN STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS, BUT NOT LIMITED TO ALL ELECTRICAL CONNECTIONS, PIPE, WIRING, VALVES, VALVE COVERS, CONTROLLERS, SECURITY CABINETS, ETC., FOR A COMPLETE, AUTOMATIC AND FULLY OPERATIONAL IRRIGATION SYSTEM.
26. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS TO INSTALL ALL WATER TAPS, METERS, BACKFLOW PREVENTERS WITH SECURITY CAGES, CONCRETE, TRENCHING, PIPE, BACKFILL, SLEEVES, WIRES, VALVE BOXES WITH COVERS, ALL PERMITS AND FEES ASSOCIATED WITH THIS WORK, ETC., REQUIRED TO PROVIDE SERVICE CONNECTIONS FOR INSTALLATION OF NEW WATER METERS AND WATER TAPS PER THE CITY OF CHANDLER STANDARDS AND MAG SPECIFICATIONS.
27. EVERY ATTEMPT HAS BEEN MADE TO IDENTIFY THE LANDSCAPE AND IRRIGATION ELEMENTS THAT MAY BE DISRUPTED BY THIS ROADWAY CONTRACT. THE CONTRACTOR SHALL TAKE GREAT CARE IN PROTECTING IN PLACE ALL LANDSCAPE AND IRRIGATION ELEMENTS THAT CAN BE PROTECTED IN PLACE WITHOUT ANY DISTURBANCE TO THE REMAINING RESIDENTIAL AND COMMERCIAL LOTS LANDSCAPE AND IRRIGATION SYSTEM.
28. THE GRADATION, SIZE AND COLOR OF THE DECOMPOSED GRANITE LOCATED WITHIN THE PRIVATE COMMERCIAL LOTS VARIES FROM LOT TO LOT. THE CONTRACTOR AS PART OF THE RESTORATION OF THE PRIVATE/COMMERCIAL LANDSCAPE SHALL BE REQUIRED TO MATCH GRADATION, SIZE AND COLOR OF EACH INDIVIDUAL LOT AT NO ADDITIONAL COST.
29. THE EXISTING IRRIGATION COMPONENTS SHALL BE PROTECTED AND MAINTAINED IN THEIR CURRENT CONDITION WHERE FEASIBLE OR REPAIRED, REPLACED, EXTENDED AND RECONNECTED IN AREAS THAT ARE DISTURBED AS SHOWN ON THE PROJECT PLANS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN WATER TO ALL EXISTING PLANT MATERIALS DESIGNED TO REMAIN THROUGH-OUT THE DURATION OF THE CONTRACT THROUGH THE USE OF REPAIRS, RECONNECTIONS, REPLACEMENTS OR REROUTING OF THE SYSTEM AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100% WITHIN 48 HOURS FOLLOWING INITIAL DISTURBANCE OF ANY OF THE IRRIGATION COMPONENTS. THE CONTRACTOR SHALL ENSURE THAT THE ENTIRE IRRIGATION SYSTEM ASSOCIATED WITHIN THIS PROJECTS LIMITS ARE FULLY OPERATIONAL AND FUNCTIONAL AND SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO BACKFILLING AND SHALL COMPLY WITH ALL REQUIREMENTS SPECIFIED IN MAG OR AS SUPPLEMENTED OR REVISED BY THE CITY OF CHANDLER.
30. ALL TREES SHALL COMPLY WITH THE LATEST AMENDED EDITION OF THE "ARIZONA NURSERY ASSOCIATION - RECOMMENDED TREE SPECIFICATIONS." SEE SECTION 1903(6)(A), ZONING CODE;
31. IF TREE SPECIES AND/OR SIZES SHOWN ON THE APPROVED PLANS, IS NOT AVAILABLE AT THE TIME OF OPDER, CONTRACTOR SHALL CONTACT THE CITY TO FIND APPROPRIATE ALTERNATIVES AS REPLACEMENTS.

LANDSCAPE & IRRIGATION RESTORATION NOTES:

1. CONTRACTOR SHALL VERIFY LIMITS OF DISTURBANCE WITH ENGINEER. DISTURBED DECOMPOSED GRANITE SHALL HAVE NEW DECOMPOSED GRANITE MATCHING EXISTING SIZE, COLOR, & GRADATION TO ENSURE A MINIMUM OF 2" COVER OF DECOMPOSED GRANITE. ALL EXISTING PLANT MATERIAL SHALL BE PROTECTED IN PLACE UNLESS SPECIFICALLY CALLED FOR REMOVAL OR DIRECTLY IMPACTED BY WORK IMPROVEMENTS. ANY PLANT MATERIAL DAMAGED OR DESTROYED BY CONTRACTOR ACTIVITIES SHALL BE REPLACED IN LIKE KIND AND SIZE AT NO COST TO THE OWNER. NO RELOCATED OR REPLACEMENT PLANT MATERIAL SHALL EXCEED 24" MATURE HEIGHT IF LOCATED WITHIN SIGHT DISTANCE LINES OR SIGHT VISIBILITY TRIANGLES. SEE KEY NOTE FOR QUANTITIES OF EXISTING PLANT MATERIAL. ALL RESTORATION SHALL BE IN ACCORDANCE WITH PROJECT PLANS, DETAILS AND SPECIFICATIONS. DISTURBED OR DAMAGED TURF AREAS SHALL BE REPLACED WITH SOD OF THE SAME VARIETY AS THE EXISTING AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL RECONNECT, REROUTE, OR REPLACE THE EXISTING PRIVATE IRRIGATION SYSTEM TO ALL NEW AND EXISTING PLANT MATERIAL. CONTRACTOR SHALL ADD ANY EQUIPMENT NECESSARY TO GUARANTEE 100% COVERAGE TO ALL PLANT MATERIAL. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE GENERAL CONTRACTOR SHALL STAKE AREAS THAT ARE DESIGNATED TO BE DISTURBED. THE GENERAL CONTRACTOR ALONG WITH THE CITY OF CHANDLER FIELD ENGINEER SHALL MEET WITH EACH INDIVIDUAL PROPERTY OWNER OR DESIGNATED REPRESENTATIVE FOR EACH PARCEL ADJACENT TO THE PROJECT AND DESIGNATED TO BE DISTURBED TO DETERMINE WHERE THE EXISTING AND FUNCTIONING IRRIGATION SYSTEM IS LOCATED AND HOW IT IS OPERATED. IF THE IRRIGATION SYSTEM IS DEEMED FAULTY OR INSUFFICIENT, A MEETING ON SITE WITH CITY STAFF, THE CONTRACTOR AND THE RESPONSIBLE PARTY WILL BE HELD TO EVALUATE THE SPECIFIC CONDITION. THE GENERAL CONTRACTOR SHALL BE REQUIRED TO REPAIR AND OR REPLACE ALL DISTURBED OR DAMAGED IRRIGATION COMPONENTS RETURNING THEIR OPERATION TO 100%. GENERAL CONTRACTOR SHALL ENSURE THAT ALL RECONNECTIONS (WATER & POWER) HAVE BEEN TESTED AND APPROVED BY THE CITY OF CHANDLER PRIOR TO BACKFILLING. PRIOR TO FINAL ACCEPTANCE AND DURING THE MAINTENANCE PERIOD SPECIFIED THE GENERAL CONTRACTOR AND CITY OF AVONDALE FIELD ENGINEER SHALL MEET AGAIN WITH EACH PROPERTY OWNER OR DESIGNATED REPRESENTATIVE TO ENGAGE EACH AND EVERY IRRIGATION SYSTEM THAT HAS BEEN DISTURBED OR THAT IS ADJACENT TO THIS PROJECT. THE GENERAL CONTRACTOR SHALL ENSURE THAT EACH SYSTEM HAS BEEN RETURNED TO A FULLY OPERATIONAL AND FUNCTIONAL SYSTEM AND THAT ANY DEFICIENCIES HAVE BEEN CORRECTED. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIAL PROVISIONS.
3. THE CONTRACTOR SHALL REPLACE ANY EXISTING TURF GRASS DISTURBED BY CONSTRUCTION WITH NEW SOD TO MATCH EXISTING TURF GRASS SPECIES/ HYBRID. ADJUST EXISTING SPRINKLER IRRIGATION LATERAL PIPES AND HEADS AS NEEDED TO ENSURE 100% COVERAGE AND MINIMIZE OVERSPRAY.

PLANT LEGEND

	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS	HEIGHT	CALIPER
	TREES						
	Pistacia x 'Red Push'	Red Push Pistache	7	48" Box	Standard	12' - 14'	3.0 - 4.0
	Quercus virginiana	Southern Live Oak	21	48" Box	Standard	13' - 15'	2.75 - 4.0
	SHRUBS						
	Dodonaea viscosa	Hop Seed Bush	11	5 Gal.	Container Full		
	Convolvulus cneorum	Bush Morning Glory	40	5 Gal.	Container Full		
	Lantana X 'Dallas Red'	Dallas Red Lantana	46	5 Gal.	Container Full		
	Leucophyllum laevigatum	Chihuahuan Sage	58	5 Gal.	Container Full		
	Nerium oleander	Oleander	30	5 Gal.	Container Full		
	Tecoma x 'Orange Jubilee'	Orange Jubilee	14	5 Gal.	Container Full		

NOTE:
1. ALL TREES SHALL COMPLY WITH THE LATEST AMENDED EDITION OF THE "ARIZONA NURSERY ASSOCIATION RECOMMENDED TREE SPECIFICATIONS." SEE SECTION 1903(6)(a), ZONING CODE.

PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE SR. SITE DEVELOPMENT INSPECTOR AT 480-782-3061 AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION OF WORK.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

NOTE:
ALL PLANT MATERIAL PLACEMENT IS DIAGRAMATIC. PLANT MATERIAL SHALL BE FIELD ADJUSTED TO AVOID CONFLICTS WITH ANY EXISTING OR PROPOSED UTLIITIES, LIGHTING, HARDSCAPE, ETC. CONTRACTOR SHALL STAKE AND HAVE APPROVED BY CITY OF CHANDLER REPRESENTATIVE PROPOSED NEW LOCATIONS OF ANY PLANT MATERIAL NEEDING ADJUSTMENT.

No.	REVISIONS	DATE	BY

PRIME CONSULTANT:
j2 engineering and environmental design
8222 south 48th street, suite 135
phoenix, arizona 85044
phone: 602.438.2221
www.j2design.us
SUB CONSULTANT

Registered Landscape Architect
CERTIFICATE NO.
35538
JEFFREY T. VELASQUEZ
EXPIRES: 9/30/2023

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	ESN
DRAWN BY:	ESN
CHECKED BY:	JTV
DATE:	02/10/2023

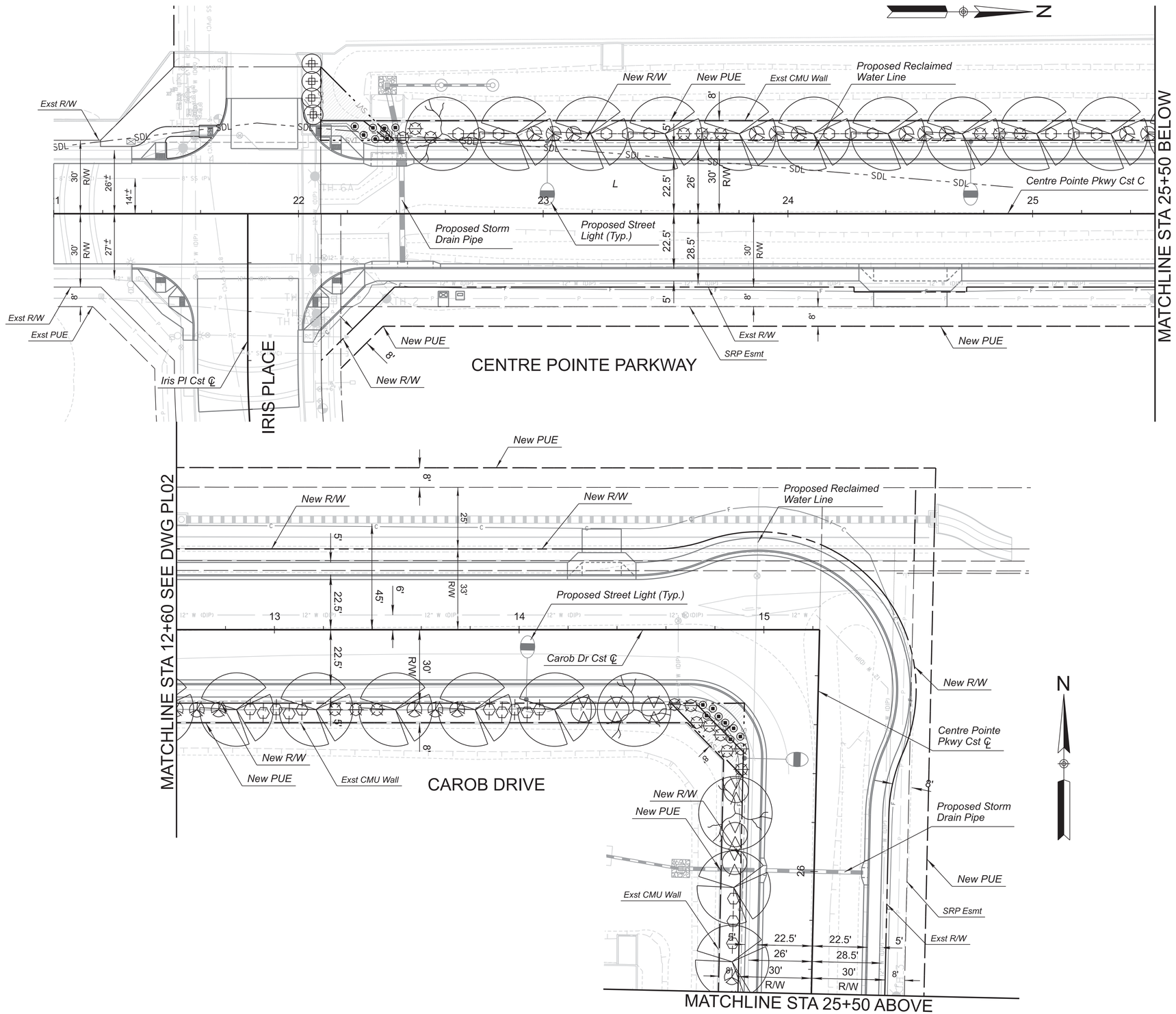
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

LANDSCAPE NOTES AND LEGEND

CITY PROJECT NO.
ST2007.401

DWG. NO.
LS101

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS



PLANT LEGEND			
SYMBOL	TREE NAME	SIZE	QTY.
	Pistacia x 'Red Push' Red Push	48" BOX (12'-14' TALL)	7
	Quercus virginiana Southern Live Oak	48" BOX (13'-15' TALL)	21
SYMBOL	SHRUB NAME	SIZE	QTY.
	Dodonaea viscosa Hop Seed Bush	5 GAL.	11
	Convolvulus cneorum Bush Morning Glory	5 GAL.	40
	Lantana X 'Dallas Red" Dallas Red Lantana	5 GAL.	46
	Leucophyllum laevigatum Chihuahuan Sage	5 GAL.	58
	Nerium oleander Oleander	5 GAL.	30
	Tecoma x 'Orange Jubilee Orange Jubilee	5 GAL.	14

— — SDL — — SIGHT DISTANCE LINE

— - - SVT - - — SIGHT VISIBILITY TRIANGLE

NOTE:

1. PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR / DEVELOPER SHALL NOTIFY THE SR. SITE DEVELOPMENT INSPECTOR AT 480-782-3061 AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION OF WORK.
2. ALL TREES SHALL COMPLY WITH THE LATEST AMENDED EDITION OF THE "ARIZONA NURSERY ASSOCIATION RECOMMENDED TREE SPECIFICATIONS." SEE SECTION 1903 (6)(a), ZONING CODE.
3. QUANTITIES SHOWN ON THIS SHEET ARE FOR THE TOTAL PROJECT AREA.

SHURB & GROUNDCOVER COVERAGE:

TOTAL PLANTING AREA- 13,442 SQ.FT.

TOTAL SHRUB & GROUNDCOVER AREA - 5,394 SQ.FT.

No.	REVISIONS	DATE	BY

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02/10/2023

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		DATE:	02/10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

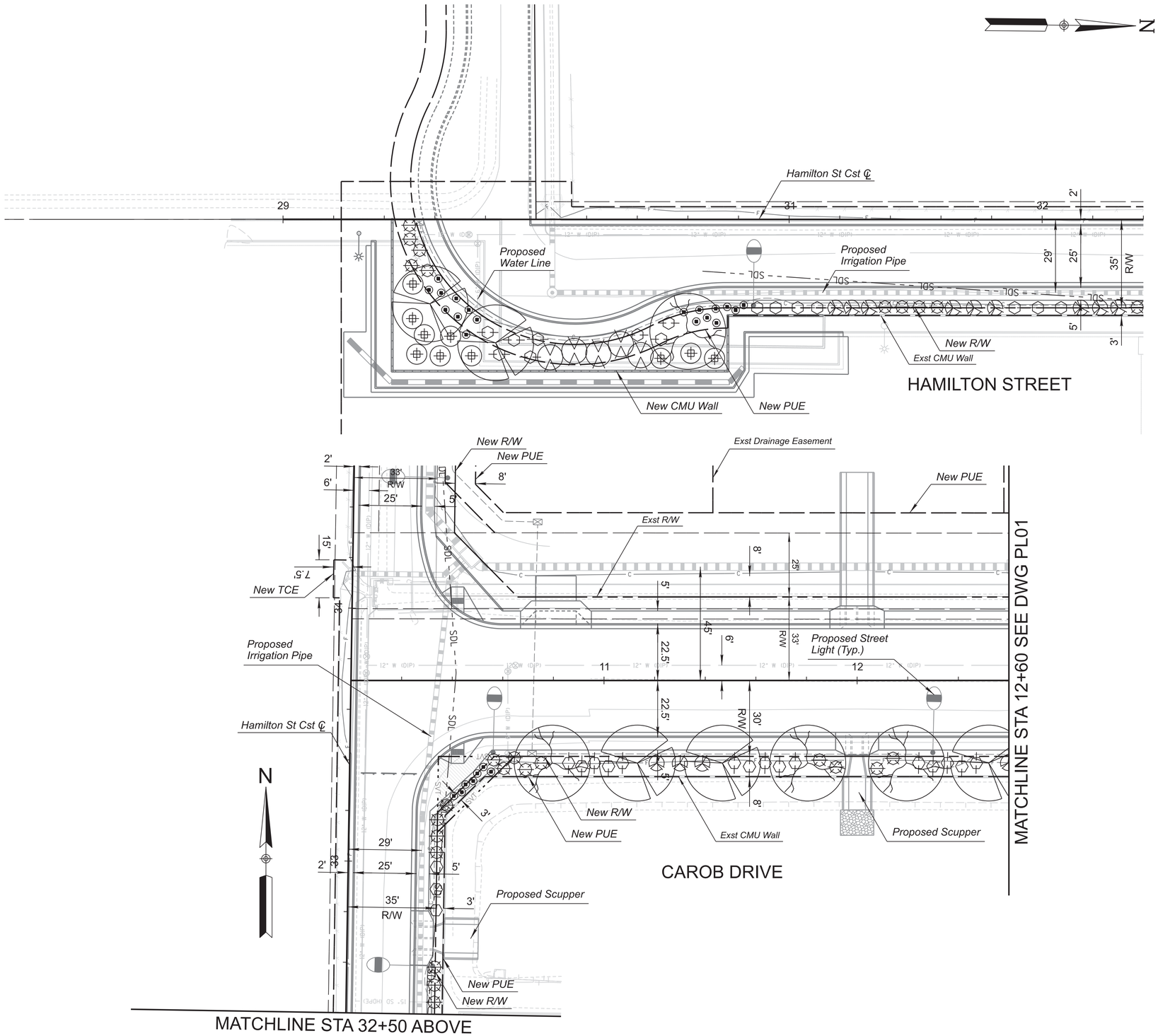
LANDSCAPE PLAN

CITY PROJECT NO.
ST2007.401

DWG. NO.
LS201

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

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PLANT LEGEND

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13,442 SQ.FT.

TOTAL SHRUB & GROUNDCOVER AREA -
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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

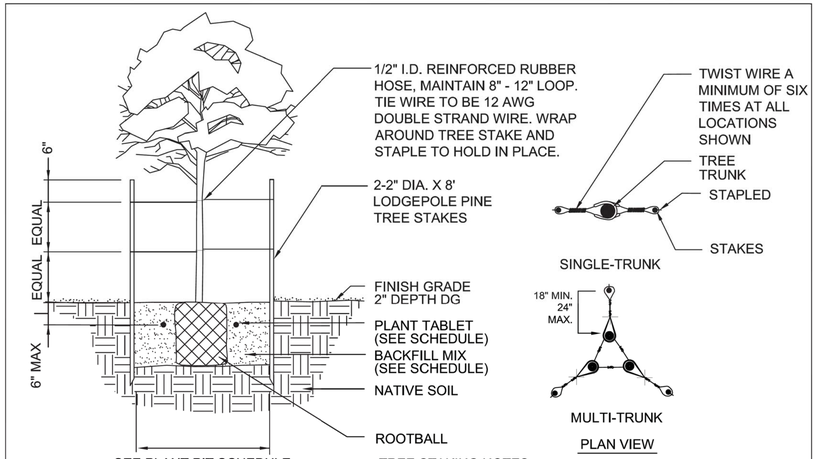
LANDSCAPE PLAN

CITY PROJECT NO.
ST2007.401

DWG. NO.
LS202

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

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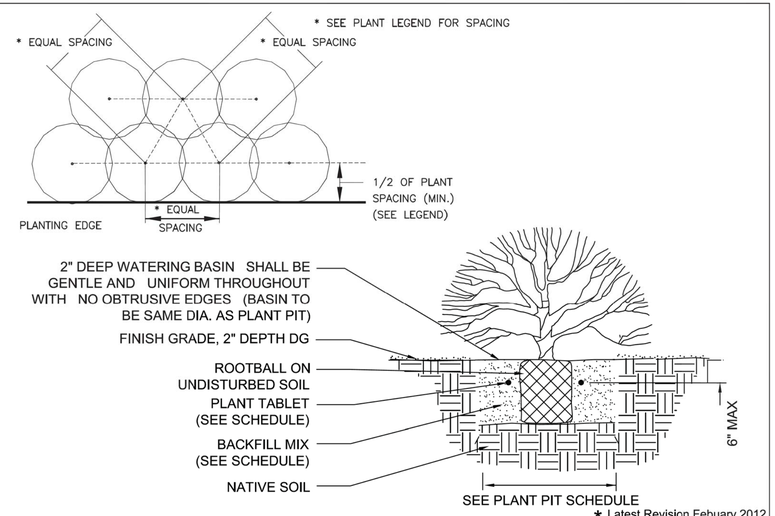


TREE STAKING NOTES-
1. STAKE TREES ONLY IF REQUIRED.
2. SET STAKES 6" MINIMUM IN UNDISTURBED SOIL.

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 801 NTS	CITY OF CHANDLER STANDARD DETAIL	**TREE PLANTING AND STAKING**	DATE: 02/09/12	C-801

1 NTS



★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 805 NTS	CITY OF CHANDLER STANDARD DETAIL	**SHRUB AND GROUND COVER PLANTING**	DATE: 02/09/12	C-805

2 NTS

A - PLANTING PIT DIMENSIONS FOR TREES, SHRUBS, GROUNDCOVERS, CACTUS AND ACCENTS

PLANT SIZE	WIDTH	DEPTH
1 GALLON	2X's the width of the Root Ball	Same Depth as Root Ball
5 GALLON	2X's the width of the Root Ball	Same Depth as Root Ball
15 GALLON	3X's the width of the Root Ball	Same Depth as Root Ball
24" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
30" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
36" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
48" BOX	3X's the width of the Root Ball	Same Depth as Root Ball

B - PLANT PIT DIMENSIONS FOR PALMS

TRUNK DIAMETER AT GRADE	MINIMUM DIAMETER PLANTING PIT	MINIMUM DEPTH PLANTING PIT
12 – 24"	48"	42"
25 – 32"	56"	44"
33 – 36"	60"	48"

C - PLANT TABLET SCHEDULE FOR TREES, SHRUBS, CACTUS, ACCENTS AND PALMS

TREES, SHRUBS, CACTUS AND ACCENTS

1 GALLON	1 TABLET
5 GALLON	2 TABLETS
15 GALLON	4 TABLETS
24" BOX	6 TABLETS
36" BOX	8 TABLETS
48" BOX	10 TABLETS

PALMS

1 TABLET PER 2 FEET OF TRUNK HEIGHT

D - BACKFILL MIX

TREES AND SHRUBS

3 PARTS EXCAVATED TOPSOIL
1 PART SAND
PLANT TABLETS PER SCHEDULE C

CACTUS AND ACCENTS

1 PART EXCAVATED TOPSOIL
1 PART SAND
PLANT TABLETS PER SCHEDULE C

PALMS

PALM TREE BACKFILL SHALL BE 100% SAND.
PLANT TABLETS PER SCHEDULE C

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 806 NTS	CITY OF CHANDLER STANDARD DETAIL	**PLANT PIT SCHEDULE**	DATE: 02/09/12	C-806

3 NTS

No.	REVISIONS	DATE	BY

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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

LANDSCAPE DETAILS

CITY PROJECT NO.
ST2007.401

DWG. NO.
LS301

53 OF 89

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

IRRIGATION CONTRACTOR NOTES:

1. UPON BIDDING OF IRRIGATION PLANS, THE IRRIGATION CONTRACTOR SHALL RECOGNIZE THAT THESE PLANS ARE DIAGRAMMATIC AND INTENDED AS BASIC GUIDELINES ONLY, THEREFORE, THE FOLLOWING SHOULD BE NOTED:
   A. IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM AND THE PLANTING MATERIALS, AND ARCHITECTURAL FEATURES. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
   B. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS ARE NOT PERMITTED.
2. ALL EXACT QUANTITIES OF EQUIPMENT REMAIN THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR AND THEY SHALL PROVIDE THEIR OWN MATERIALS TAKE OFF LIST. NO ADDITIONAL COST TO THE CITY WILL BE ACCEPTED FOLLOWING THE BIDDING OF THIS PROJECT.
3. THE IRRIGATION DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE OF THE CITY'S WATER MAINLINE OF 60 PSI AND MAXIMUM DYNAMIC PRESSURE OF 90 PSI. CONTRACTOR SHALL CONFIRM AVAILABLE PRESSURE AND SHALL NOTIFY THE CITY IMMEDIATELY IF THE DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM IS NOT BETWEEN 60 - 90 PSI. .
4. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
5. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED. BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE CITY'S REPRESENTATIVE.
6. ALL LABOR, MATERIALS, FEES & PERMITS TO CONNECT THE ELECTRICAL POWER FROM THE POWER SOURCE TO THE NEW IRRIGATION CONTROLLER IS TO BE PROVIDED BY THE CONTRACTOR AND INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
7. CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM FOR A PERIOD OF NINETY (90) DAYS AFTER PROJECT CONSTRUCTION ACCEPTANCE. MAINTENANCE SHALL INCLUDE ALL NECESSARY REPLACEMENTS, ADJUSTMENTS, AND CLEAN UP OPERATIONS.
8. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED PER IRRIGATION DETAILS AND PER PROJECT AND MANUFACTURER'S SPECIFICATIONS.
9. ALL PROPOSED EQUIPMENT SHALL BE SUBMITTED FOR APPROVAL PER PROJECT SPECIFICATIONS PRIOR TO INSTALLATION. CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS TO APPROVED ITEMS WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY OR LANDSCAPE COMPLIANCE COORDINATOR. ANY NON-APPROVED ITEMS INSTALLED MAY BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED ITEMS AT NO ADDITIONAL COSTS TO CITY BEYOND COSTS OF APPROVED ITEMS.
10. ALL CONTROL WIRES SHALL BE SLEEVED SEPARATELY IN UL APPROVED 1" PVC ELECTRICAL CONDUIT (OR SIZE AS REQUIRED) WITHIN SAME SLEEVE AS MAINLINE PIPE.
11. TYPE 'K' HARD COPPER SHALL BE USED FOR ALL MAINLINE PIPING ABOVE GRADE AND EXTENDING A MINIMUM OF 18" AND A MAXIMUM OF 24" BELOW FINISH GRADE.
12. THE CITY'S INDIVIDUAL USER DEPARTMENT WILL INSPECT AND APPROVE THE WORK AT THE FOLLOWING STAGES OF COMPLETION. ANY WORK COMPLETED WITHOUT THESE INSPECTIONS MUST BE REMOVED PRIOR TO ACCEPTANCE OF THAT PHASE OF WORK. THESE STAGES ARE:
   A. COMPLETION OF ALL TRENCHING AND INSTALLATION OF ALL MAINLINES PRIOR TO BACKFILLING, INCLUDING THE ELECTRIC VALVES, AND ANY ISOLATION VALVES. THE MAINLINE SHALL BE PRESSURE TESTED AS OUTLINED IN PROJECT SPECIFICATIONS.
   B. COMPLETION OF INSTALLATION OF ALL CONTROL WIRES PRIOR TO BACKFILLING.
   C. INSTALLATION OF ALL LATERAL VALVES, LINES, AND HEADS PRIOR TO BACKFILLING.
14. PRIOR TO ANY CONSTRUCTION OR UTILITY WORK STARTING WITHIN A CITY RIGHT-OF-WAY, WHICH WILL AFFECT EXISTING CITY-OWNED AND MAINTAINED LANDSCAPING OR IRRIGATION SYSTEMS, THERE WILL BE A MEETING ON SITE TO SHOW THAT THE EXISTING SYSTEMS OR LANDSCAPED AREAS ARE IN PROPER REPAIR AND FUNCTIONING. AT THE COMPLETION OF THE CONSTRUCTION WORK THERE WILL BE ANOTHER MEETING AND INSPECTION ON SITE. THE SAME AREAS AND SYSTEMS WILL AGAIN BE REVIEWED. ANY DAMAGE TO THE LANDSCAPING OR TO THE IRRIGATION SYSTEM WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR UTILITY COMPANY AND MUST BE REPAIRED TO THE SATISFACTION OF THE CITY WITHIN FIVE (5) WORKING DAYS. IF THIS WORK IS NOT COMPLETED WITHIN THE ALLOTTED TIME, THE CITY WILL MAKE THE REPAIRS OR CORRECTIONS AND MONEY WILL BE DEDUCTED OR BILLED TO THE GENERAL CONTRACTOR ON THE PROJECT. THE INDIVIDUALS WHICH SHOULD BE REPRESENTED AT THESE ON-SITE MEETINGS SHALL BE: A REPRESENTATIVE FROM THE CONTRACTOR, A REPRESENTATIVE FROM THE ENGINEERING FIRM OR CITY RESPONSIBLE FOR THE CONSTRUCTION INSPECTION, AND A REPRESENTATIVE FROM THE CITY STREET DEPARTMENT.

EMITTER NOTES:

1. INSTALL ALL EMITTERS UPGRADE FROM PLANT MATERIALS.
2. INSTALL MULTI-OUTLET EMITTERS A MAXIMUM OF 24" BEYOND TREE PIT LOCATIONS.
4. USE 3/4" CLASS 200 PVC DRIP LATERAL PIPES AS SHOWN PER PLANS WITH RIGID 1/2" SCHEDULE 40 PVC EMITTER LATERAL PIPE STUBS TO EMITTERS AT 7'-0" MAXIMUM LENGTHS, HOWEVER THESE 1/2" PIPES ARE CONSIDERED INCIDENTAL TO LATERAL PIPING AND ARE NOT SHOWN OR QUANTIFIED IN PLANS OR ESTIMATE.
5. INSTALL FLUSHING END CAPS AT ENDS OF LATERAL PIPES IN VALVE BOX AS SHOWN PER PLANS- TWO FLUSH CAPS MAY BE INSTALLED WITHIN SAME VALVE BOX IF SHOWN LOCATED WITHIN SAME VICINITY ON PLANS.
6. INSTALL ALL EQUIPMENT PER PROJECT DETAILS, PROJECT SPECIFICATIONS, AND MANUFACTURER'S DIRECTIONS.

CITY OF CHANDLER WATER NOTES:

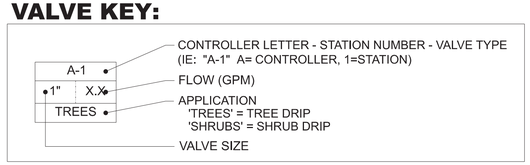
1. THE FOLLOWING INSTALLATION PROCEDURE SHALL BE FOLLOWED ON ALL WATER LINE EXTENTIONS OF LINES OVER ELEVEN (11) MONTHS IN AGE: A NEW VALVE OF LIKE SIZE SHALL BE INSTALLED IN THE NEW LINE EXTENTION AT THE POINT OF EXTENSION. A ¾" SADDLE AND RISER SHALL BE INSTALLED IN THE LINE BEWTEEN THE NEW VALVE AND THE FIRST EXISTING VALVE IN THE EXISTING SYSTEM. THIS LINE WILL BE FLUSHED AND TESTED BY THE CITY AND THE ¾" NUT AND RISER REMOVED.
2. WATERLINES SHALL BE INSTALLED PER C-308 AND THE CITY SUPPLEMENT TO SECTION 610.
3. FIRE HYDRANTS SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN ACCORDANCE WITH C-303 AND C-305.
4. ALL WATER SERVICE LINE AND METER BOX INSTALLATIONS SHALL CONFORM TO C-301. METER BOXES AND LIDS SHALL BE SUPPLIED BY THE DEVELOPER AND INSTALLED FACING THE LOT.
5. CITY OF CHANDLER WILL FURNISH AND INSTALL ALL WATER METERS WITH PREVAILING COSTS TO BE PAID BY DEVELOPER. THE CITY OF CHANDLER WATER DIVISION SHALL BE NOTIFIED AT (480) 782-3700 24 HOURS PRIOR TO INSTALLATION. THE DEVELOPER SHALL PROVIDE ANY NECESSARY WATER METER ADAPTERS FOR CONNECTION TO THE SERVICE LINES.
6. ALL VALVES 6" – 24" SHALL BE GATE TYPE IN CONFORMANCE WITH MAG SECTION 630.3, UNLESS OTHERWISE NOTED.
7. ALL VALVE BOXES SHALL CONFORM TO C-307.
8. CITY WATER VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY. CITY REQUIRES A 48 HOUR NOTICE FOR SYSTEM SHUTDOWNS. CONTRACTOR IS REQUIRED TO NOTIFY AFFECTED CUSTOMERS 24 HOURS PRIOR. BUSINESS' MAY REQUIRE AFTER HOURS SHUTDOWNS. RESIDENTIAL FLOWS AFTER SHUTDOWN MAY REQUIRE A PUMP. CONTRACTOR IS RESPONSIBLE TO INSTALL 2" TAPS TO RELIEVE PRESSURE AND ALLEVIATE RESIDUAL FLOWS WHEN NEEDED.
9. ALL TAPS SHALL USE A BRONZE SERVICE SADDLE. EIGHT (8) INCHES OR LESS SHALL BE SINGLE STRAP AND TEN (10) INCHES OR GREATER SHALL BE DOUBLE STRAP.
10. TAPS IN ACP SHALL BE MADE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE ACP MANUFACTURERS ASSOCIATION.
11. ALL FIRELINE PIPING, POTABLE WATER DISTRIBUTING PIPING LARGER THAN TWO (2) INCHES IN DIAMETER SHALL HAVE TRACER WIRES INSTALLED PER C-408.
12. ALL PIPE IN THE GROUND SHALL HAVE AWG THWN #14 INSULATED COPPER TRACING WIRE ATTACHED TO THE PIPE AND INTERCONNECTED TO VALVES AT VALVE BOX SPACING
13. POLYETHYLENE ENCASEMENT SHALL CONFORM WITH THE APPLICABLE REQUIREMENTS OF AWWA C-600 & AWWA C-105.
14. MECHANICAL OR RESTRAINED JOINT DUCTILE IRON PIPE SHALL BE USED FOR WATER LINE PROTECTION WHEN MAG STD DTL 404 IS SPECIFIED ON THE PLANS.
15. VALVE BOX AND COVER GRADE LOCATED OUTSIDE OF A PAVED AREA SHALL BE SET ONE HALF INCH ABOVE SIDEWALK OR ADJACENT GRADE PER C-317.
16. NO VALVE BOX SHALL BE LOCATED WITHIN SIDEWALK OR SIDEWALK RAMP.
17. ALL 1" SERVICES SHALL BE INSTALLED WITH APPROVED ANGLE BALL METER VALVE, OF A SIZE DEPENDENT ON WATER METER SIZE. SEE C-301.
18. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH "OUT OF SERVICE" SIGNS AT TIME OF INSTALLATION. THE SIGNS SHALL COMPLY WITH FIRE DEPARTMENT STANDARD DETAIL NO. FD123 AND SHALL REMAIN ON THE FIRE HYDRANTS UNTIL THE WATER LINES ARE TESTED, APPROVED AND PRESSURIZED. THE SIGNS SHALL BE REINSTALLED AT ANY TIME ANY FIRE HYDRANTS ARE TAKEN OUT OF SERVICE, REGARDLESS OF REASON OR THE AMOUNT OF TIME THE FIRE HYDRANTS ARE EXPECTED TO BE OUT OF SERVICE, AND DISPATCH SHALL BE NOTIFIED AT (480) 782-4130. ONLY CITY PERSONNEL SHALL REMOVE A SIGN.

PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/ DEVELOPER SHALL NOTIFY THE SR. SITE DEVELOPMENT INSPECTOR AT 480-782-3061 AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION WORK.

IRRIGATION LEGEND:

DETAIL:	SYMBOL:	DESCRIPTION:	QTY:
1 IR301		BALL VALVE: SPEARS 3/4" TRUE UNION 2000 BALL VALVE, SLIP X SLIP; INSTALL IN 10" ROUND VALVE BOX WITH BOLT DOWN T-COVER.	1 EA
2 IR301		NEW LATERAL FLUSH VALVE ASSEMBLY: 3/4" PVC BALL VALVE WITH 3/4" FEMALE HOSE SWIVEL INLET & 3/4" MALE HOSE THREAD OUTLET; 3/4" SCH 40 FLEX RISER PIPE WITH SCH 40 PVC MALE ADAPTERS; INSTALL IN TAN COLOR 10" ROUND VALVE BOX WITH BOLT DOWN T-COVER.	6 EA
3 IR301 #C-808, 4 IR301 #C-817	NOT SHOWN	MULTI OR SINGLE OUTLET DRIP EMITTER ASSEMBLY: 6 OUTLET OR SINGLE EMITTERS WITH 1/2" FPT BASE AND 30 MESH FILTRATION; 0.160 x 0.220 VINYL DISTRIBUTION TUBING BURIED MINIMUM OF 4" BELOW GRADE; INSTALL IN 6" ROUND EMITTER BOX WITH 'T' COVER (FLOW SIZING AND NUMBER OF OUTLETS PER PLANT SIZES - SEE 'EMITTER & BUBBLER SCHEDULE' PER CITY STANDARD DETAIL #C-817 ON DWG. NO. ID02)	MULTI - 28 EA SINGLE - 199 EA
5 IR301 #C-810		DRIP REMOTE CONTROL VALVE ASSEMBLY: RAINBIRD #100-PEB-R 1" CONTROL VALVE WITH RECLAIMED WATER ID HANDLE; 1" BRASS FULL PORT SINGLE UNION BODY BALL VALVE WITH STAINLESS STEEL BALL & HANDLE; CHRISTY'S 3" x 4" VALVE ID TAG WITH CONTROLLER LETTER-STATION NUMBER-VALVE TYPE S-7-T) PRINTED ONE SIDE & BRASS WYE FILTER WITH 100 MESH STAINLESS STEEL SCREEN & 3/4" MPT INLET & OUTLET; FIXED 30 PSI LOW FLOW PRESSURE REGULATOR (0.1 - 8.0 GPM) WITH 3/4" FPT INLET & OUTLET; 3/4" PVC UNION RATED AT MIN. 150 PSI; INSTALL IN TAN COLOR JUMBO SIZE (21 1/2" x 14 3/4" x 12") RECTANGULAR VALVE BOX WITH BOLT DOWN T-COVER	4 EA
6 IR301, 7 IR302 #C-811	X" PS X" WS	SLEEVES: 6" SCHEDULE 40 PVC PIPE SLEEVE (STANDARD WHITE COLOR PVC) SIZE AS NOTED PER PLAN; 1" UL APPROVED SCH 40 PVC ELECTRICAL CONDUIT (OR SIZED AS REQUIRED) FOR CONTROL WIRES INSTALLED PER CITY STANDARD TRENCHING DETAIL #C-811; 2 1/2" UL APPROVED DB120 PVC ELECTRIC CONDUIT FOR POWER SUPPLY FROM ELECTRIC METER TO PUMP	1" WS - 50 LF 3" PS - 18 LF 6" PS - 50 LF
6 IR301, 8 IR302 #C-811	1 1/2"	MAINLINE PIPE: 1 1/2" SCHEDULE 40 PVC SOLVENT WELD PIPE WITH SCHEDULE 80 PVC FITTINGS	817 LF
		TREE DRIP LATERAL PIPE: 3/4" SDR 21 CLASS 200 PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC FITTINGS	1,332 LF
		SHRUB DRIP LATERAL PIPE: 3/4" SDR 21 CLASS 200 PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC FITTINGS	1,333 LF

VALVE KEY:



No.	REVISIONS	DATE	BY

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CHECKED BY:	JTV
DATE:	02/10/2023

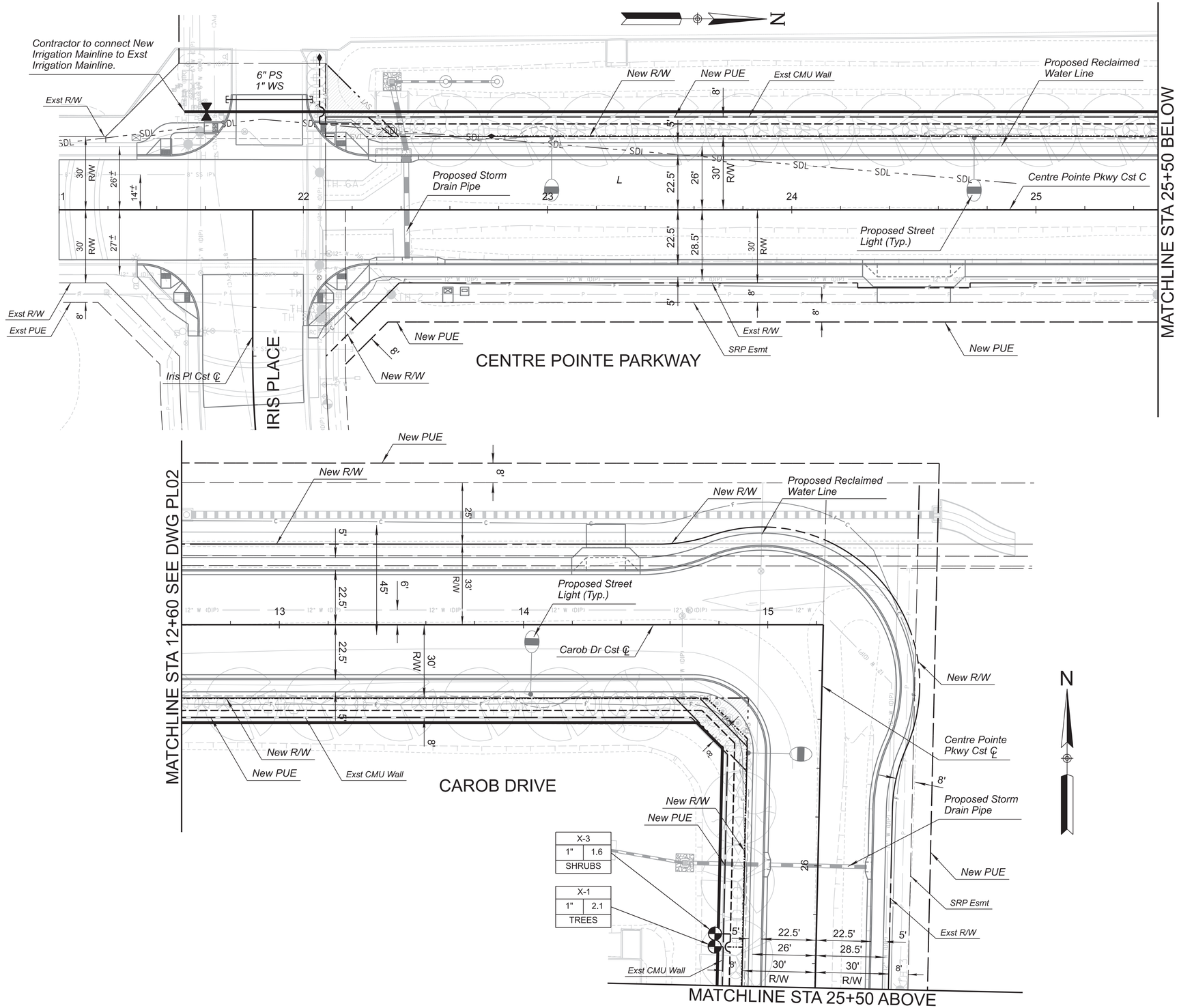
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
IRRIGATION
NOTES AND LEGEND

CITY PROJECT NO.
ST2007.401

DWG. NO.
IR101

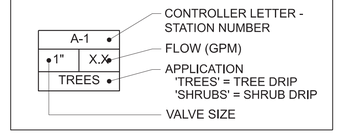
54 OF 89

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS



IRRIGATION LEGEND		
SYMBOL	IRRIGATION DESCRIPTION	SYMBOL
	ISOLATION BALL VALVE: 1 1/2"	1 EA
	LATERAL FLUSH VALVE ASSEMBLY: 1/2"	6 EA
	DRIP REMOTE CONTROL VALVE ASSEMBLY: 1"	4 EA
	MAINLINE PIPE: 1 1/2" SCHEDULE 40 PVC	817 LF
	TREE LATERAL PIPE: 3/4" CLASS 200 PVC	1,332 LF
	SHRUB LATERAL PIPE: 3/4" CLASS 200 PVC	1,333 LF
X" PS 1" WS	SLEEVES: PIPE SLEEVES (PS) = X" SCH 40 PVC PIPE WIRE SLEEVES (WS) = 1" SCH 40 ELECTRICAL CONDUIT	1" - 50 LF 3" - 18 LF 6" - 50 LF

VALVE KEY



NOTE:
1. PRIOR TO ANY LANDSCAPE OR IRRIGATION CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR / DEVELOPER SHALL NOTIFY THE SR. SITE DEVELOPMENT INSPECTOR AT 480-782-3061 AT LEAST 48 HOURS IN ADVANCE OF INSTALLATION OF WORK.

2. QUANTITIES SHOWN ON THIS SHEET ARE FOR THE TOTAL PROJECT AREA.

No.	REVISIONS	DATE	BY

PRIME CONSULTANT:
J2 engineering and environmental design
8222 south 48th street, suite 135
phoenix, arizona 85044
phone: 602.438.2221
www.j2eng.com
SUB CONSULTANT:

Registered Landscape Architect
CERTIFICATE NO.
35538
JEFFREY T. VELASQUEZ
Date Signed 02/10/2023

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ESN
DRAWN BY:	ESN
CHECKED BY:	JTV
DATE:	02/10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

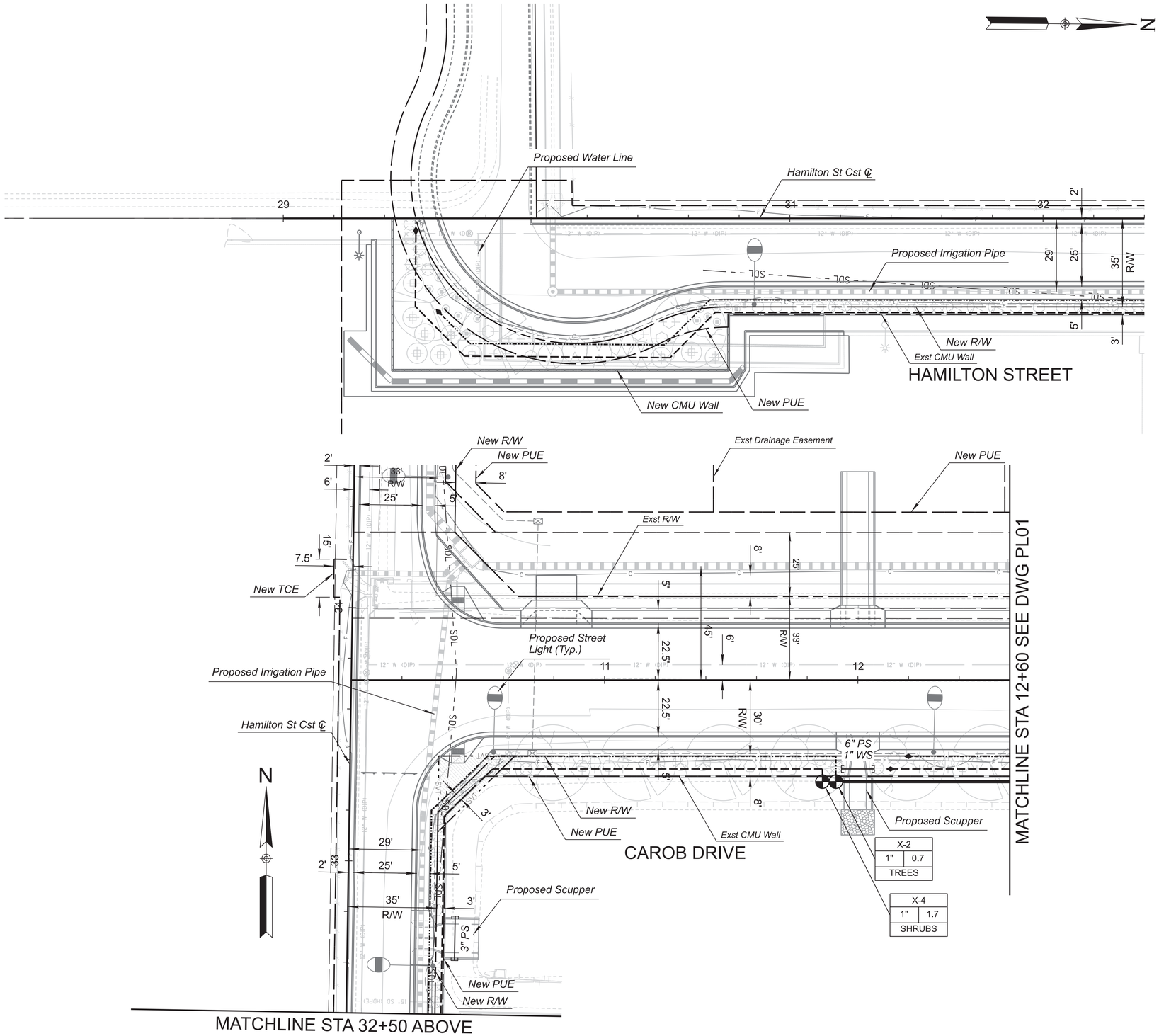
IRRIGATION PLAN

CITY PROJECT NO.
ST2007.401

DWG. NO.
IR201

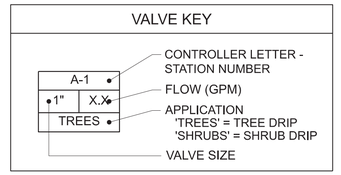
55 OF 89

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS



IRRIGATION LEGEND		
SYMBOL	IRRIGATION DESCRIPTION	SYMBOL
	ISOLATION BALL VALVE: 1 1/2"	1 EA
	LATERAL FLUSH VALVE ASSEMBLY: 1/2"	6 EA
	DRIP REMOTE CONTROL VALVE ASSEMBLY: 1"	4 EA
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	TREE LATERAL PIPE: 3/4" CLASS 200 PVC	1,332 LF
	SHRUB LATERAL PIPE: 3/4" CLASS 200 PVC	1,333 LF
X" PS 1" WS	SLEEVES: PIPE SLEEVES (PS) = X" SCH 40 PVC PIPE WIRE SLEEVES (WS) = 1" SCH 40 ELECTRICAL CONDUIT	1" - 50 LF 3" - 18 LF 6" - 50 LF

VALVE KEY



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2. QUANTITIES SHOWN ON THIS SHEET ARE FOR THE TOTAL PROJECT AREA.

No.	REVISIONS	DATE	BY

PRIME CONSULTANT:
J2 engineering and environmental design
8222 south 48th street, suite 135
phoenix, arizona 85044
phone: 602.438.2221
www.j2design.us
SUB CONSULTANT

Registered Landscape Architect
CERTIFICATE NO.
35538
JEFFREY T. VELASQUEZ
Date Signed 02/10/2023
Not valid without signature and original seal.

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ESN
DRAWN BY:	ESN
CHECKED BY:	JTV
DATE:	02/10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

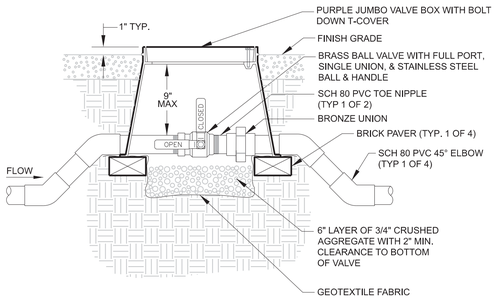
IRRIGATION PLAN

CITY PROJECT NO.
ST2007.401

DWG. NO.
IR202

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

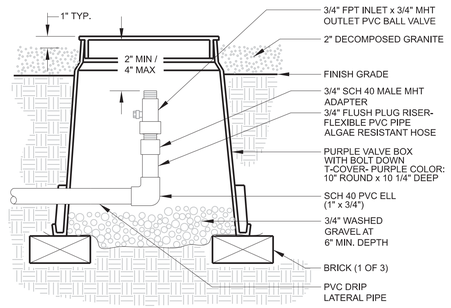
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NOTES:
1. BALL VALVE SHALL MATCH NOMINAL SIZE OF PIPE.
2. EMBOSS VALVE BOX COVER WITH "B.V." IN 1" HIGH STENCIL LETTERS USING STYLUS TIP TORCH.
3. INSTALL BALL VALVE PRIOR TO EACH REMOTE CONTROL VALVE AS SHOWN PER C.O.C. #C-810.

1 ISOLATION BALL VALVE

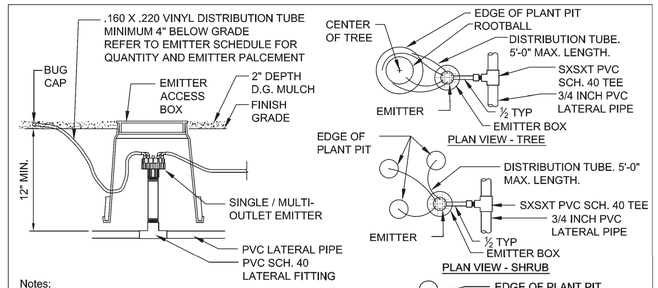
NTS



NOTE:
EMBOSS VALVE BOX COVER WITH "F.V." IN 1-INCH HIGH STENCIL LETTERS USING STYLUS TIP TORCH.

2 LATERAL FLUSH VALVE ASSEMBLY

NTS



Notes:
1. Emission points shall be located uphill of plant centerline and shall deliver water directly to root ball (typ.)
2. At least one emitter tube outlet shall be located within 4" of plant centerline.
3. All basins 2" deep. Basins to be same level as plant pit.
4. Place emitter so that top edge of emitter is visible above finished grade
5. Number of openings and emitter tubes required per plant is based on plant size. See Emitter Schedule.

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 808 NTS	CITY OF CHANDLER STANDARD DETAIL	EMITTER ACCESS BOX AND EMITTER LAYOUT	DATE: 02/09/12	C-808

3 EMITTER ACCESS BOX AND EMITTER LAYOUT

NTS

A - EMITTER SCHEDULE FOR TREES, SHRUBS, GROUNDCOVERS AND ACCENTS

PLANT SIZE	TYPE OF EMITTER	NUMBER OF EMITTERS	GALLONS PER HOUR PER PLANT
1 GALLON	SINGLE OR MULTI	1	.6 or 1
5 GALLON	SINGLE OR MULTI	1	.6 or 1
15 GALLON	MULTI	4	4
24" BOX	MULTI	4	4
30" BOX	MULTI	6	6
36" BOX	MULTI	6	6
48" BOX	MULTI	6	6

B - BUBBLER SCHEDULE FOR PALMS

TRUNK DIAMETER AT GRADE	NUMBER OF BUBBLERS
12 – 24"	2
25 – 32"	2
33 – 36"	2

C - CACTUS

DO NOT PROVIDE IRRIGATION TO CACTUS

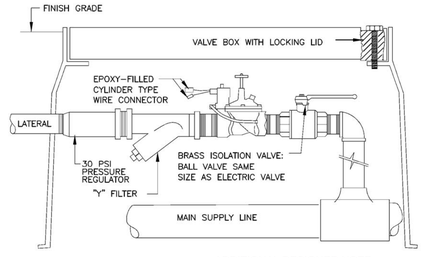
NOTES:
1. REFER TO EMITTER AND BUBBLEER DETAILS FOR SPECIFICATIONS AND LAYOUT INFORMATION.
2. ADJUST IRRIGATION OPERATING TIMES TO ACCOMMODATE PLANT MATURITY, SOIL TYPE, PLANT EXPOSURE AND SEASONAL REQUIREMENTS.

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 817 NTS	CITY OF CHANDLER STANDARD DETAIL	EMITTER-BUBBLER SCHEDULE	DATE: 02/09/12	C-817

4 EMITTER SCHEDULE

NTS



NOTES:
1. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION.
2. QUICK COUPLERS SHALL BE IN SEPERATE VALVE BOXES.
3. PEA GRAVEL SHALL BE 4" TO 6" IN DEPTH UNDER VALVE BOX.

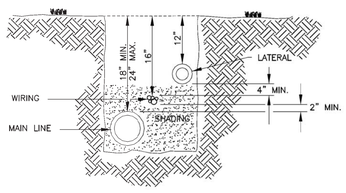
ADDITIONAL DESIGNER NOTE:
4. CONTROL VALVES REQUIRES A 24 VOLT DC LATCHING SOLENOID COMPATIBLE WITH CONTROLLER TYPE.

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 810 NTS	CITY OF CHANDLER STANDARD DETAIL	REMOTE CONTROL ELECTRIC VALVE DRIP	DATE: 02/09/12	C-810

5 REMOTE CONTROL ELECTRIC VALVE - DRIP

NTS



NOTES:
1. ALL PIPE INSTALLATION, TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL CONFORM WITH MAG SEC. 440 AND 601.
2. TAPE AND BUNDLE WIRING AT 10 FEET INTERVALS.
3. SHADING SHALL BE DONE WITH NATIVE SOIL.
4. DEPTH DIMENSION MAY VARY WHERE INDICATED ON IRRIGATION PLAN.
5. ALL PIPE INSTALLED UNDER PAVED SURFACES SHALL BE PLACED IN PVC SLEEVING, 2 TIMES THE NOMINAL SIZE OF THE PIPE*.
*ALL IRRIGATION WORK WITHIN THE PUBLIC R.O.W. REQUIRES A SEPARATE PERMIT.

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER	DETAIL NO.
C- 811 NTS	CITY OF CHANDLER STANDARD DETAIL	IRRIGATION TRENCH	DATE: 02/09/12	C-811

6 TRENCHING DETAIL

NTS

No.	REVISIONS	DATE	BY

PRIME CONSULTANT: J2 engineering and environmental design, 8222 south 48th street, suite 135, phoenix, arizona 85044, phone: 602.438.2221, www.j2design.us
SUB CONSULTANT:

Registered Landscape Architect, CERTIFICATE NO. 35538, JEFFREY T. VELASQUEZ, 12/31/23

SCALE (H):	N/A	CHECKED BY:	JTV
SCALE (V):	N/A	DATE:	02/10/2023
DESIGNED BY:	ESN		
DRAWN BY:	ESN		

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

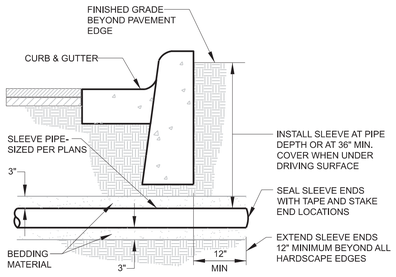
IRRIGATION DETAILS

CITY PROJECT NO.
ST2007.401

DWG. NO.
IR301

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

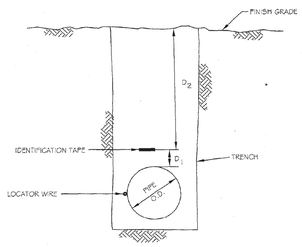
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NOTES:
1. BACKFILL TRENCH WITH 3" OF BEDDING MATERAIL UNDER SLEEVE AND 3" ABOVE SLEEVE. BEDDING MATERIAL MAY BE NATIVE SOIL OR SAND BUT SHALL NOT HAVE ANY ROCKS LARGER THAN 1/4" DIA.

7 TYPICAL SLEEVE DETAIL

NTS



NOTES:
1. I.D. TAPE AND LOCATOR WIRE SHALL BE INSTALLED ON PUBLIC DISTRIBUTION AND COLLECTION MAINS FOR ALL PIPE MATERIALS AND SIZES 4" AND LARGER.
2. I.D. TAPE AND MARKINGS SHALL BE PER MAG STD. SPEC. SEC. 616.4, EXCEPT AS MODIFIED HEREON.
3. LOCATOR WIRE SHALL BE 14 GAUGE THWN COPPER WIRE.
4. D_1 SHALL BE 12", HOWEVER, ADJUST D_1, AS NECESSARY, SO THAT D IS NEVER GREATER THAN 48".
5. LOCATOR WIRE SHALL ORIGINATE/ TERMINATE AT VALVE BOXES AND MANHOLES AND BE SECURED TO VALVE BOX OR MANHOLE NO MORE THAN 12" BELOW COVER.
6. LOCATOR WIRE SHALL BE VERIFIED FOR ELECTRICAL CONTINUITY ALONG THE ENTIRE LENGTH.

IDENTIFICATION TAPE COLOR AND MARKING SCHEDULE

PIPELINE USE	COLOR	PRINTED MESSAGE
RECLAIMED WATER	MAG SPEC SEC 616.4	MAG SPEC SEC 616.4
POTABLE WATER	SOLID COLUMBIA BLUE	CAUTION: POTABLE WATER LINE
SEWER	GREEN	CAUTION: SANITARY SEWER

DETAIL NO.			APPROVED: CITY ENGINEER DATE: 01-27-11	DETAIL NO.
C-408	CITY OF CHANDLER STANDARD DETAIL	PIPE LOCATOR WIRE & I.D. TAPE		C-408 NTS

8 PIPE LOCATOR WIRE & ID TAPE

NTS

IRRIGATION LEGEND

SYMBOL	MFG. AND DESCRIPTION	QUANTITY

FRICTION LOSS

PRESSURE AT SOURCE	**	P.S.I.
PRESSURE VERIFIED WITH CITY	64	P.S.I.
FRICTION LOSS THROUGH: (TO FARTHEST HEAD)		
WATER METER	N/A	P.S.I.
VACUUM BREAKER	**	P.S.I.
MAIN LINE PIPE	N/A	P.S.I.
VALVE	N/A	P.S.I.
LATERAL LINE PIPE	N/A	P.S.I.
TOTAL FRICTION LOSS	N/A	P.S.I.
REQUIRED PRESSURE AT HEAD	**	P.S.I.

(TOTAL FRICTION LOSS)+(REQUIRED P.S.I. AT HEAD) = PRESSURE REQUIRED AT SOURCE 64 P.S.I.

CALCULATIONS PERFORMED BY _____ (SIGNED) _____ (DATE)

★ Latest Revision Febuary 2012

DETAIL NO.			APPROVED: CITY ENGINEER DATE: 02/09/12	DETAIL NO.
C- 816 NTS	CITY OF CHANDLER STANDARD DETAIL	TYPICAL IRRIGATION LEGEND AND INFORMATION		C-816

9 TYPICAL IRRIGATION LEGEND AND INFORMATION

NTS

No.	REVISIONS	DATE	BY

PRIME CONSULTANT: J2 engineering and environmental design
8222 south 48th street, suite 135
phoenix, arizona 85044
phone: 602.438.2221
www.j2eandc.com
SUB CONSULTANT

Registered Landscape Architect
CERTIFICATE NO.
35538
JEFFREY T. VELASQUEZ
EXPIRATION DATE: 9/30/2023

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	ESN
DRAWN BY:	ESN
CHECKED BY:	JTV
DATE:	02/10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD

IRRIGATION DETAILS

CITY PROJECT NO.
ST2007.401

DWG. NO.
IR302

C.O.C. LOG NO. ERW20-XXXX HAMILTON STREET IMPROVEMENTS

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CONTROL MEASURE INDEX SHEET (CMIS)

TO BE COMPLETED FOR PROJECTS WITH ONE (1) ACRE OR MORE OF SOIL/GROUND DISTURBANCE OUTSIDE OF JURISDICTIONAL WATERS OF THE U.S. (≥1 ACRE*)

* For projects that meet the definition of maintenance under AZPDES CGP, the permit threshold is five (≥ 5) acres. Consult with ADOT EP Water Resources Management to define Jurisdictional Waters of the U. S.

I. PROJECT DESCRIPTION

A. Owner Name and Address:

Chandler City Hall
175 S. Arizona Avenue
Chandler, Arizona 85225

B. Project Number: ST2007.401

C. Project Name/Location (be consistent with the plan set cover sheet):
Hamilton Street Improvements

City: Chandler County: Maricopa

Beginning Latitude (NAD 83): N 33° 15' 04"

Beginning Longitude (NAD 83): W 111° 49' 51"

Ending Latitude (NAD 83): N 33° 15' 18"

Ending Longitude (NAD 83): W 111° 49' 58"

To obtain the project latitude/longitude data, refer to the Flash Earth web link below (Bing Maps with labels):

http://www.flashearth.com/

D. Project Description:
Construction of a new two-lane collector street along Centre Pointe Parkway, Carob Drive, and Hamilton Street with curb, gutter, and sidewalks.

II. HYDROLOGIC INFORMATION

A. Percentage of the site that is impervious before and after construction:

Percentage before Construction: 19.8%

Percentage after Construction: 85.1%

B. Receiving Water(s), refer to the plan set cover sheet and the NHD Plus HR Availability Map Web Link below:
https://usgs.maps.arcgis.com/apps/MapTools/index.html?appid=41a5c2ca49bd4a83b239450e61022d53

(If unnamed, state as unnamed)
Upper Gila River Watershed, East Salt River Valley Sub Basin, Phoenix AMA

III. SOIL STABILIZATION MEASURES

☐ All disturbed soil, which will not be paved, riprapped or otherwise covered to prevent erosion, will be revegetated and/or landscaped in accordance with the project plans and specifications.

IV. MEASURES TO CONTROL STORMWATER AND AIR QUALITY

A. Temporary Stormwater and Air Quality Control Measures (CMs) / Best Management Practices (BMPs)

☐ Temporary Diversion Dikes
☐ Temporary Rock Check Dams
☐ Stabilized Construction Entrance/Exit Gravel Pad
☐ Soil Stabilizer for Wind Erosion and Dust Control
☐ Rock Inlet/Outlet Protection
☐ Sediment Control Berms
☐ Silt Fences
☒ Wattles (Excelsior/Straw/Compost)
☒ Excelsior Logs / Sediment Logs
☐ Erosion Control Mattings
☐ Seeding (Class II with final mulch cover)
☒ Gravelbag
☐ Catch Basin Temporary Fabric Filter
☐ Designated Washout Areas
☐ Protected Chemical and Material Storage Area
☐ Equipment Maintenance Procedures
☐ Others Describe:

B. Permanent and Post-construction Stormwater and Air Quality Control Measures (CMs) / Best ManagementPractices (BMPs):

☐ Crown Ditch/Dike
☐ Rock Protection
☐ Rock Riprap Channel Lining
☐ Sediment Basin
☐ Embankment Curb
☒ Spillways
☐ Downdrains
☐ Minibenching
☐ Solid Waste Management
☐ **Rock-filled Stormwater Infiltration CM/BMP as Infiltration Basin and/or Trench
☐ **Filtration Structures
☐ **Infiltration Basin and/or Trench
☐ **Retention and/or Detention Basins
☐ **Bioretention
☐ **Manufactured Treatment Devices
☐ Seeding established as a perennial vegetative cover with a density of 70% of the native background vegetative cover.
☐ Others Describe:

** Track and report to ADOT EP Water Resources Management:
ADOTWater@azdot.gov

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER — 50900 KEVIN R. THOMAS — Date Signed 10/30/23 — ARIZONA U.S.A. — Expires 06/30/25

SCALE (H):	N/A	DESIGNED BY:	KRT
SCALE (V):	N/A	DRAWN BY:	TV
		CHECKED BY:	RPW
		DATE:	10/2023

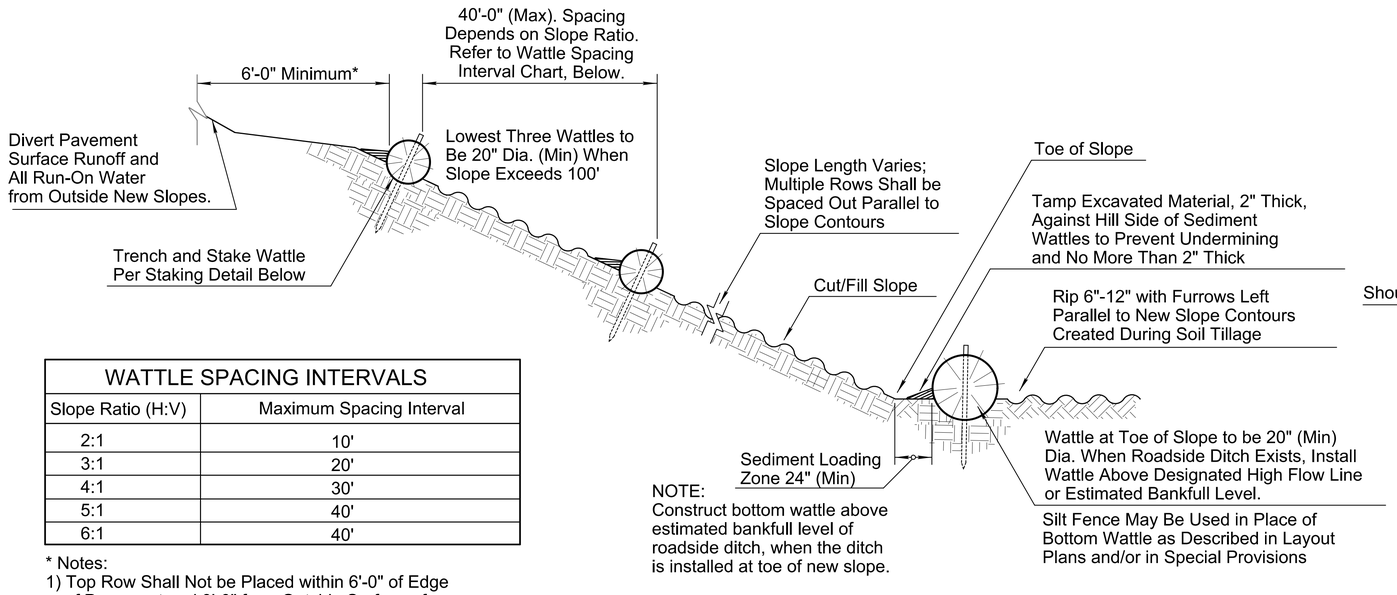
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL INDEX

CITY PROJECT NO.
ST2007.401

DWG. NO.
E01

59 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

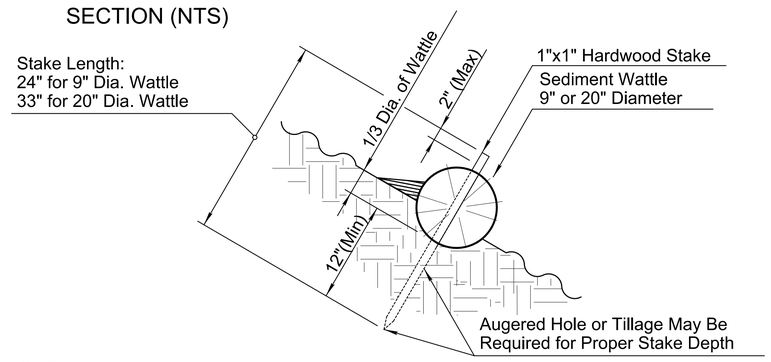


NOTE:
Construct bottom wattle above estimated bankfull level of roadside ditch, when the ditch is installed at toe of new slope.

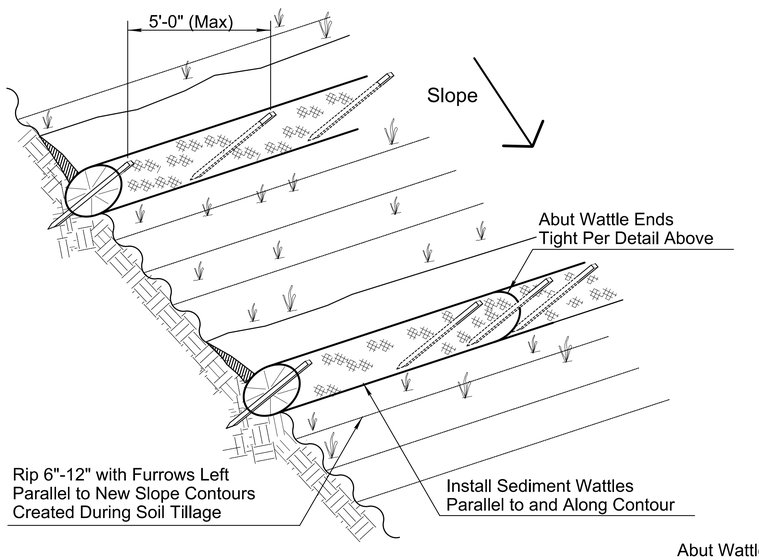
SECTION (NTS)

WATTLE SPACING INTERVALS	
Slope Ratio (H:V)	Maximum Spacing Interval
2:1	10'
3:1	20'
4:1	30'
5:1	40'
6:1	40'

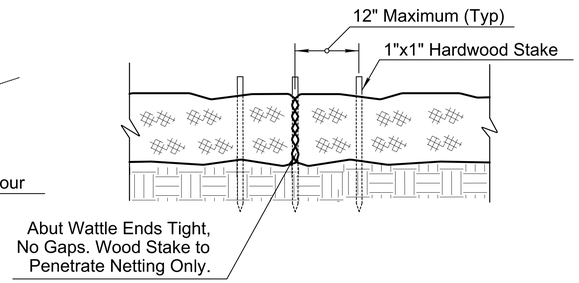
* Notes:
1) Top Row Shall Not be Placed within 6'-0" of Edge of Pavement and 9'-0" from Outside Surface of Barrier.
2) For erosive soils, place rows of wattles closer together.
3) For soils with low erosive potential, place rows of wattles further apart.



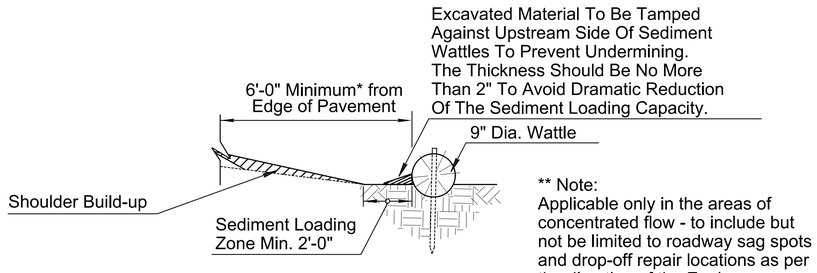
SEDIMENT WATTLE STAKING DETAIL (NTS)



SEDIMENT WATTLE LAYOUT (NTS)



SEDIMENT WATTLE OVERLAP (NTS)



NEW SHOULDER BUILDUP ** PROTECTION SECTION (NTS)

** Note:
Applicable only in the areas of concentrated flow - to include but not be limited to roadway sag spots and drop-off repair locations as per the direction of the Engineer.

NOTES:

1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturers' specifications to meet site conditions for slope protection and in accordance with good engineering practices. No Sediment Wattles shall be installed in urban freeway medians, nor where cable barrier systems are employed.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" Dia. wattle may be made from 2-3 rolled excelsior or straw blankets.
3. Butt adjoining wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any rills or gullies promptly. Make field adjustments and corrections of Wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. Construction of cut slopes 2:1 and steeper in soil and rock materials that can be ripped shall be constructed, whenever possible, by Minibenching. Refer to Slope Minibenching BMP Detail.
6. Loosening surface soil is not required where Minibenches are used. For seeded areas, tillage shall be performed to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications and these special provisions.
7. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
8. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
9. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
10. The Sediment Wattle BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
11. Refer to the Special Provisions for Sediment Wattle material specifications.
12. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL ES1
SEDIMENT WATTLE

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/3/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

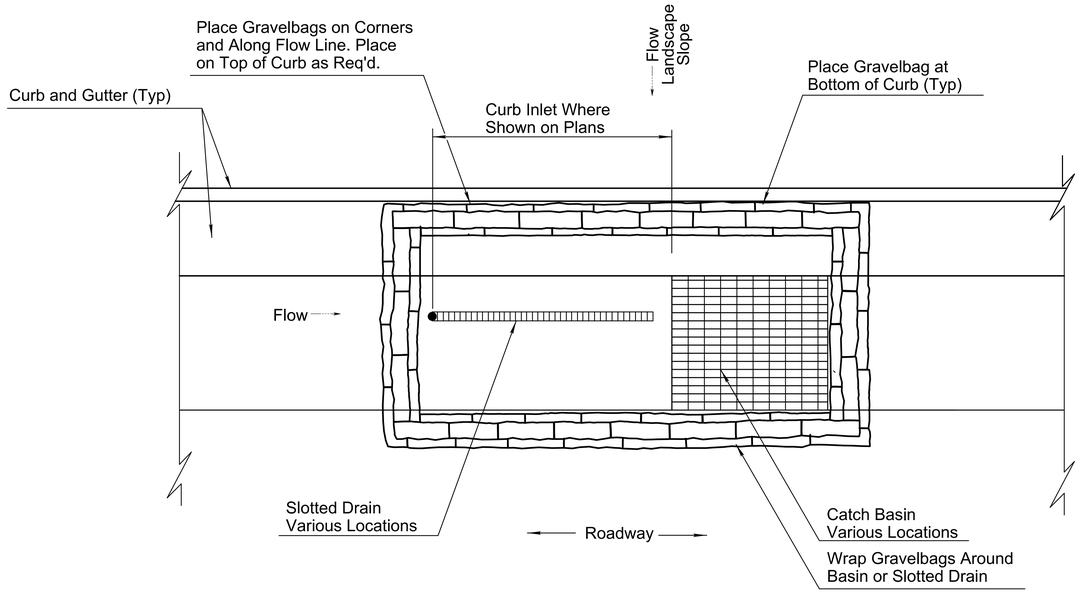
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL
DETAIL SHEET

CITY PROJECT NO.
ST2007.401

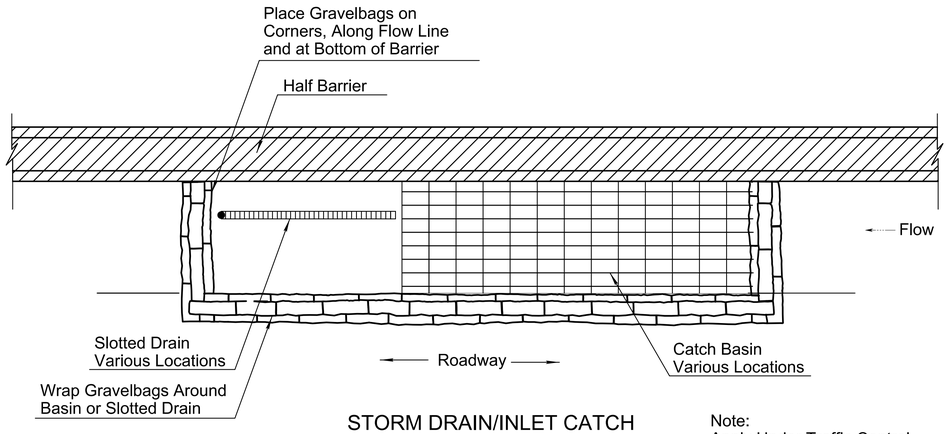
DWG. NO.
ED01

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

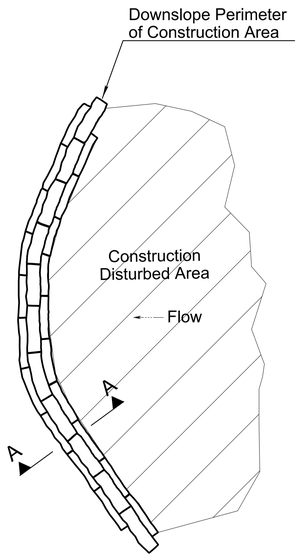


STORM DRAIN/INLET CATCH BASIN AT CURB PLAN VIEW (NTS)



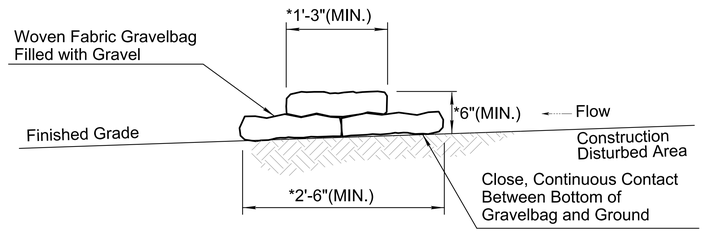
STORM DRAIN/INLET CATCH BASIN AT HALF BARRIER PLAN VIEW (NTS)

Note:
Apply Under Traffic Control.



Note:
Apply Under Traffic Control or
Outside of ClearZone/Recovery Area

GRAVELBAG SEDIMENT TRAP PLAN VIEW (NTS)



SECTION A-A (NTS)

NOTES:

1. Gravelbag material shall be from polypropylene, polyethylene, or polyamide woven fabric. Refer to Special Provisions for Mullen burst strength and ultraviolet stability requirements.
2. When sediment depth reaches 3 inches, remove and properly dispose of accumulated material.
3. Do not apply Gravelbag BMP in the area of open traffic.
4. When applied as a perimeter control BMP, Gravelbags shall be used for surface areas where wattles and silt fences are not suitable.
5. Do not install Gravelbags as multiple ditch check dams.
6. The installation and maintenance of Gravelbag BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Gravelbag BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
7. Gravelbags are designed for temporary water quality protection only. Remove Gravelbags per the direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
8. Make field adjustments and corrections of Gravelbag BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
9. Refer to Special Provisions for gradation of gravel material.
10. The Gravelbag BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
11. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL ES2
GRAVELBAG PROTECTION

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/3/2023
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	N/A	DESIGNED BY:	KRT
SCALE (V):	N/A	DRAWN BY:	TV
CHECKED BY:	RPW	DATE:	10/2023

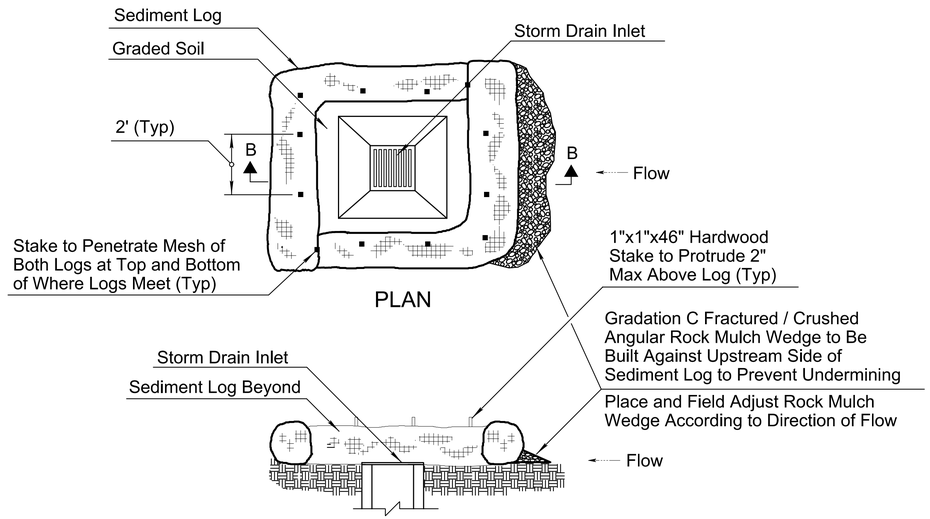
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL
DETAIL SHEET

CITY PROJECT NO.
ST2007.401

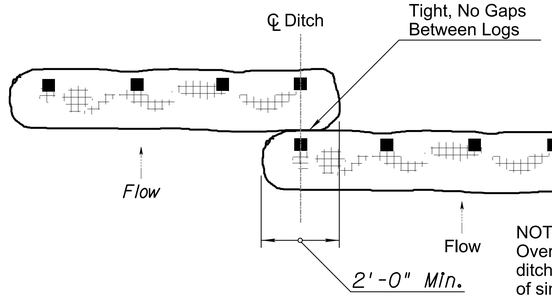
DWG. NO.
ED02

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

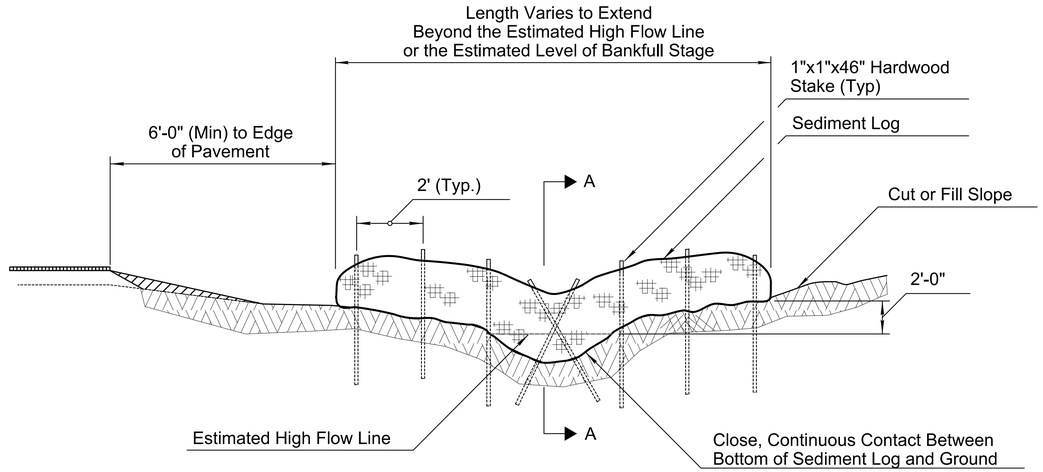


SEDIMENT LOG AT STORM DRAIN
SECTION B-B (NTS)

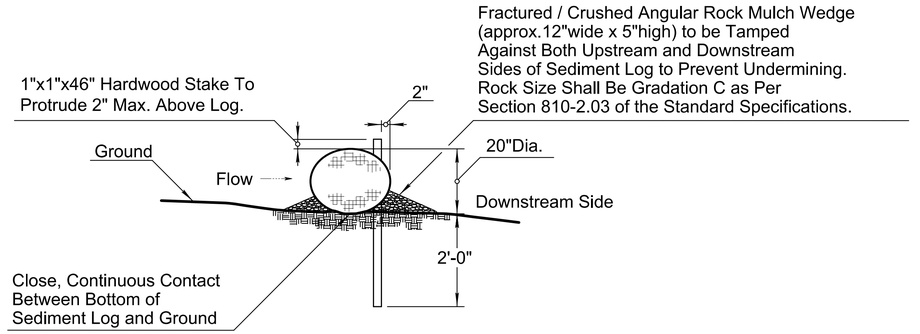


NOTE:
Overlap applies to situations where ditch/channel is wider than length of single Sediment Log. Two or multiple Sediment Logs may be necessary.

TYPICAL OVERLAP
PLAN (NTS)



SEDIMENT LOG IN DITCH/CHANNEL
SECTIONAL ELEVATION (NTS)



SECTION A-A (NTS)

NOTES:
1. Sediment Logs shall not be installed in the urban freeway medians, nor where cable barrier systems are employed.
2. Locate Sediment Logs as indicated in plans, SWPPP or as directed by the Engineer.
3. Select, install and maintain Logs per manufacturers' specifications and good engineering practices.
4. Lay Sediment Log across prepared roadside ditch or channel. Trenching or burial of Sediment Logs is not required. The close, continuous contact between the bottom of the Log and the ground is mandatory. The Logs shall be installed in the roadside ditch, swale or channel bottom perpendicular to the flow of water as shown on detail this sheet.
5. Stake Log as shown. Stakes shall be placed through downstream side only as shown.
6. DO NOT drive stakes through center of the Log. Stakes must be driven into the ground as shown.
7. Ensure that no gaps exist between soil and bottom of Sediment Log. Repair any rills or undercuts promptly.
8. Placement of Sediment Logs shall be evaluated by the Engineer in rocky soil conditions.
9. Remove Sediment Log BMPs within the ditches/channels and around the storm drain inlets as per the direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
10. Dispose of Sediment Logs and trapped sediment material and fill trench created by Sediment Log.
11. The installation and maintenance of Sediment Log BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Sediment Logs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
12. Make field adjustments and corrections of Sediment Log BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
13. Rock mulch/riprap may be required for channel/ditch lining or rock check dams for longitudinal ditch slopes that exceed 5% and/or for soil conditions not suitable for Log installation.
14. The Sediment Log BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
15. Refer to Special Provisions for Sediment Log material specifications.
16. Make field adjustments and corrections to ensure no sensitive biological resources (native species / habitats) will be adversely impacted.
17. Construct Rock Wedge with angular-shaped Gradation C Rock Mulch as defined in the special provisions. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are not acceptable.

DETAIL ES3
SEDIMENT LOG

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/06/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=20'
SCALE (V):	1"=2'
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL
DETAIL SHEET

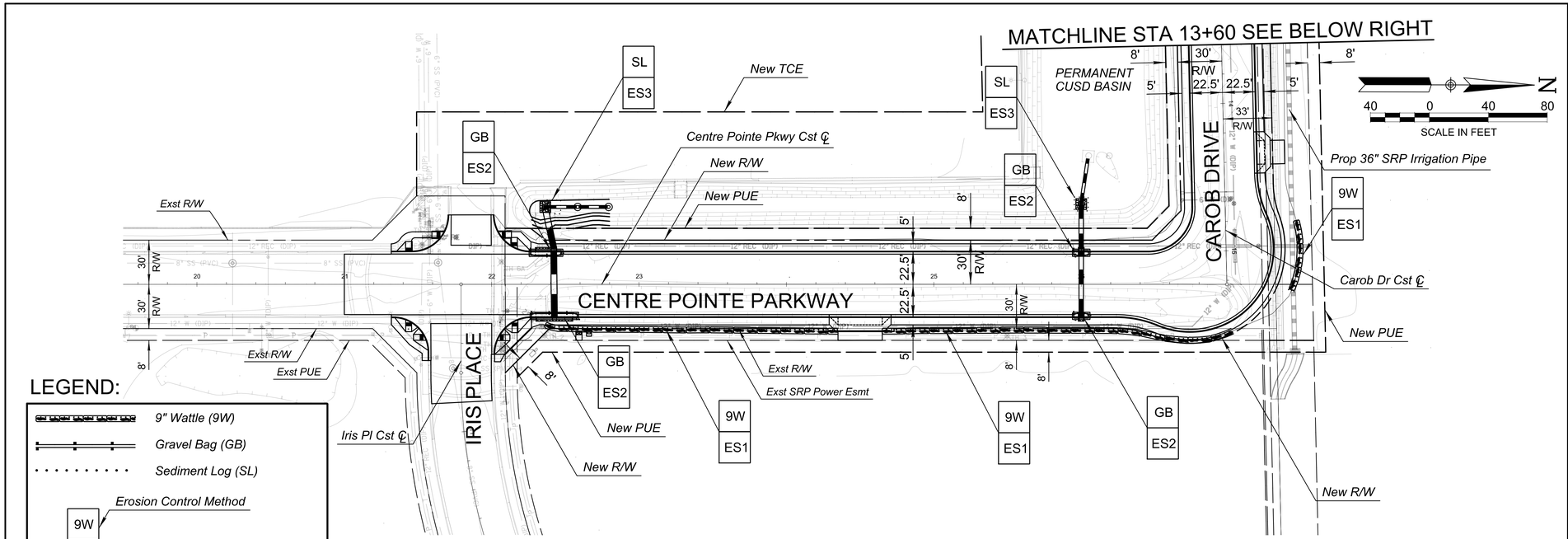
CITY PROJECT NO.
ST2007.401

DWG. NO.
ED03

62 OF 89

Call at least two full working days before you begin excavation.
ARIZONA811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

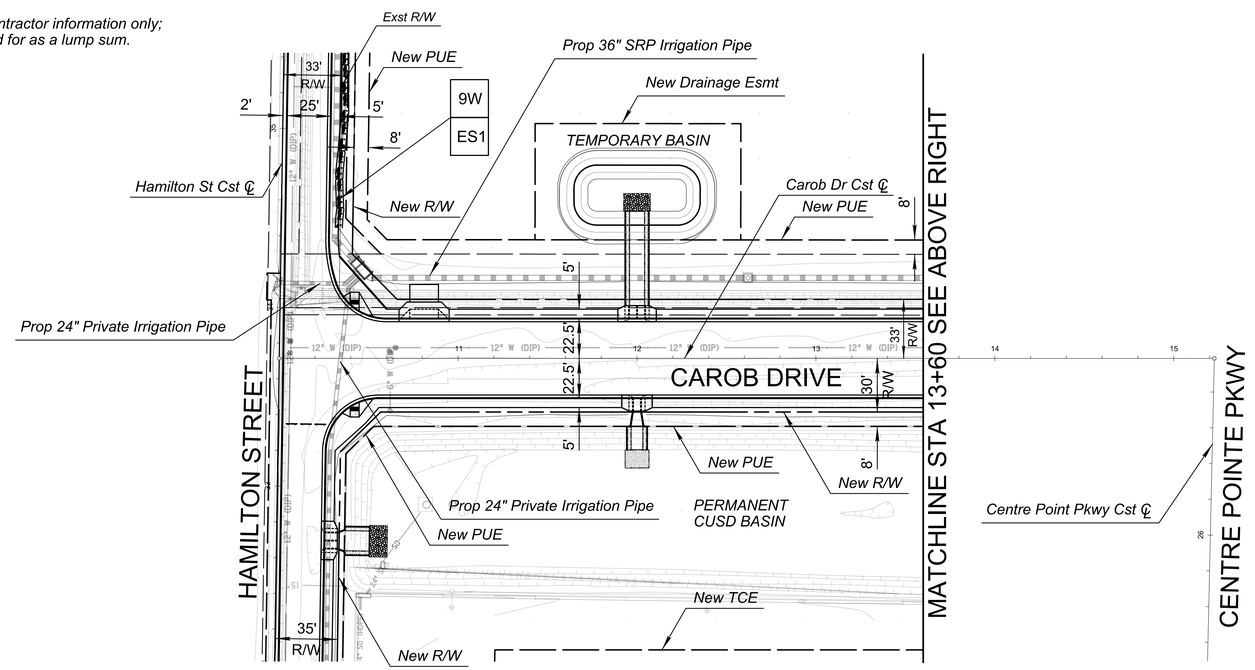
C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

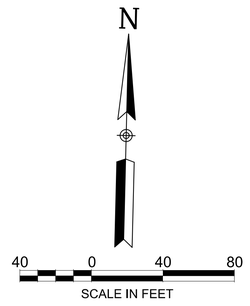


LEGEND:

- 9" Wattle (9W)
- Gravel Bag (GB)
- Sediment Log (SL)
- Erosion Control Method (9W / ES1)
- Detail Number Reference

Note:
Quantities provided for contractor information only; erosion control will be paid for as a lump sum.





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
9W	9" Sediment Wattle See Detail ES1	LF	583
GB	Gravel Bag See Detail ES2	EA	294
SL	Sediment Log See Detail ES3	LF	74

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER 50900 KEVIN R. THOMAS Date Signed 10/03/2023 ARIZONA U.S.A. Expir-es 06/30/25

SCALE (H):	1"=40'
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

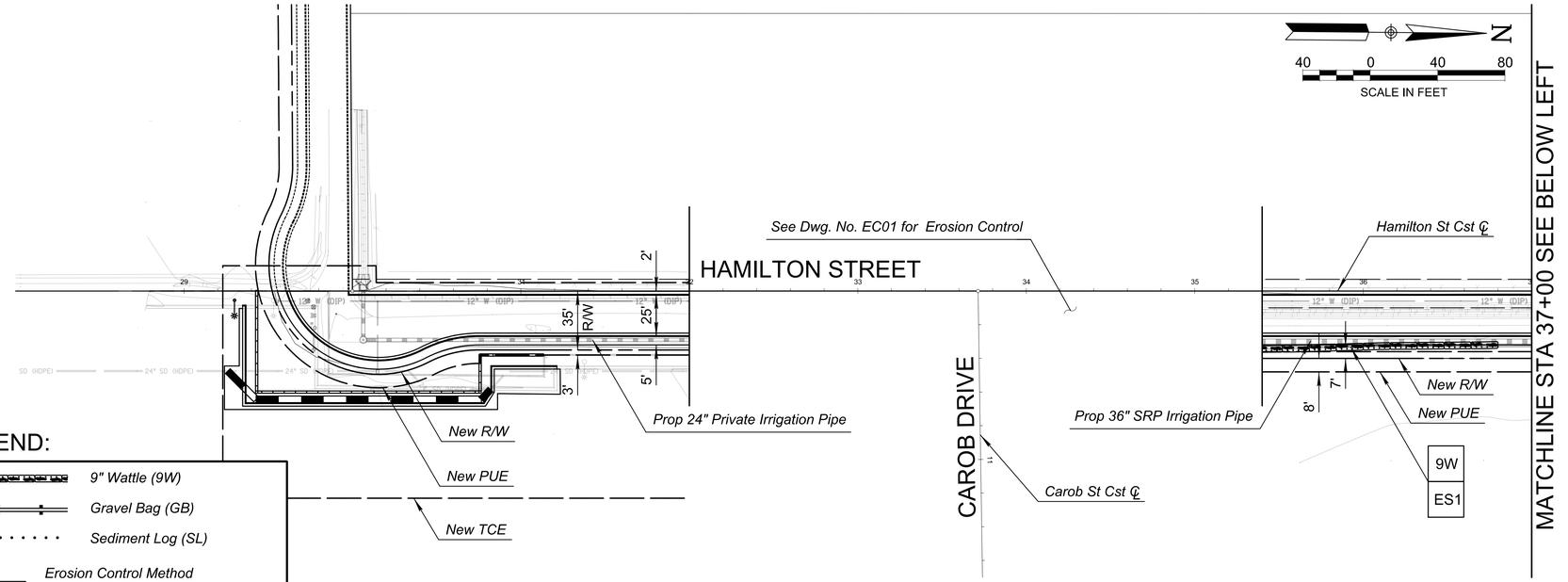
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL
PLAN SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
EC01

63 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS



LEGEND:

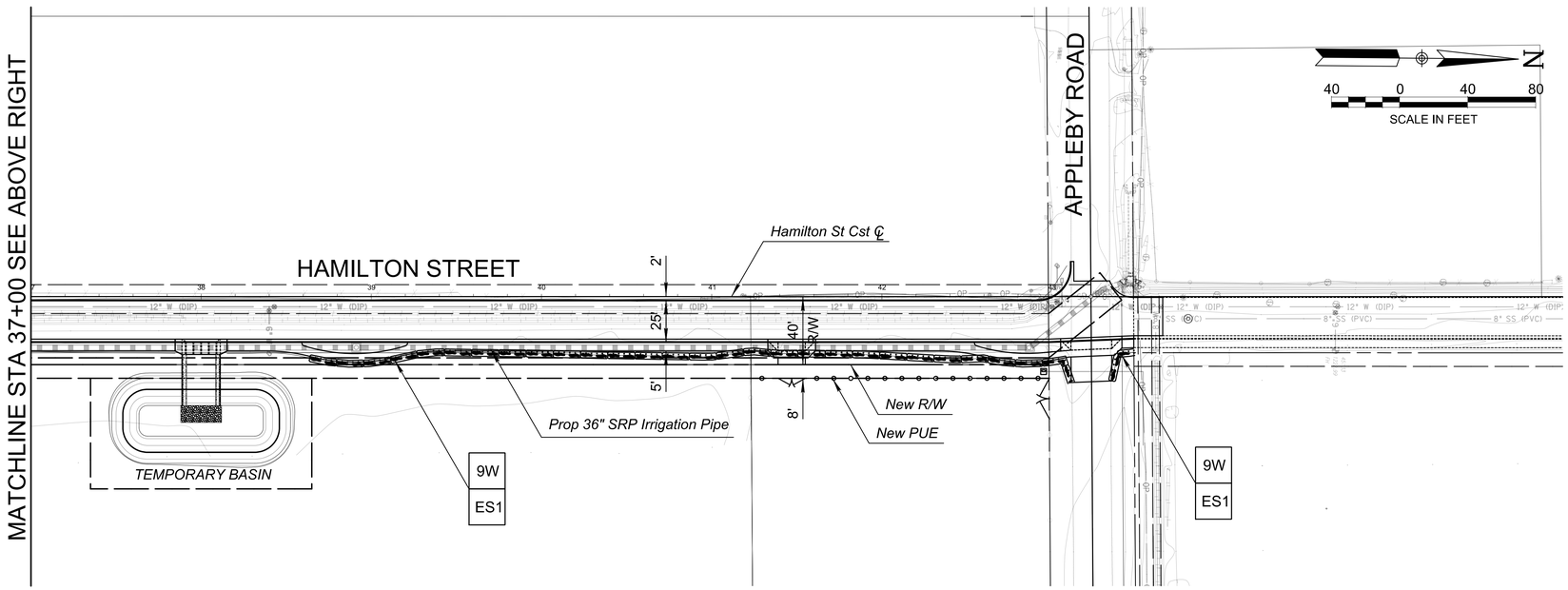
- 9" Wattle (9W)
- Gravel Bag (GB)
- Sediment Log (SL)

Erosion Control Method

9W
ES1

Detail Number Reference

Note:
Quantities provided for contractor information only;
erosion control will be paid for as a lump sum.



CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
9W	9" Sediment Wattle See Detail ES1	LF	625

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

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M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed 10/05/23
ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=40'
SCALE (V):	N/A
DESIGNED BY:	KRT
DRAWN BY:	TV
CHECKED BY:	RPW
DATE:	10/2023

CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
EROSION CONTROL
PLAN SHEET

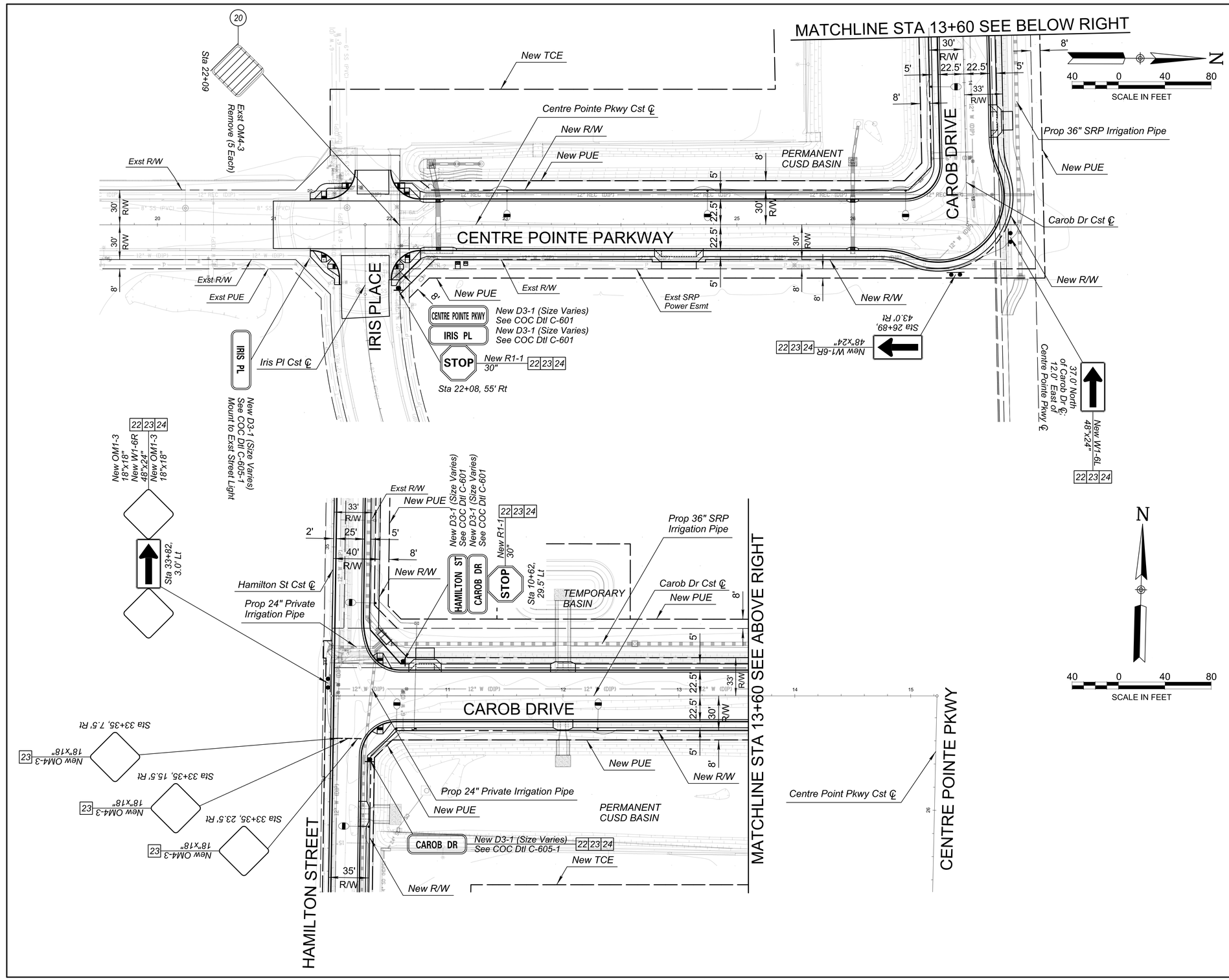
CITY PROJECT NO.
ST2007.401

DWG. NO.
EC02

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
22	2" Perforated Sign Post per COC Dtl C-613	LF	107
23	Sign Panels	SF	67
24	Sign Foundation per COC Dtl C-613	EA	9

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY
20	Remove Barricade & Signs	EA	5

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

NFra Inc.
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77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
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ARIZONA U.S.A.
Expires 06/30/25

SCALE (H):	1"=40'
SCALE (V):	N/A
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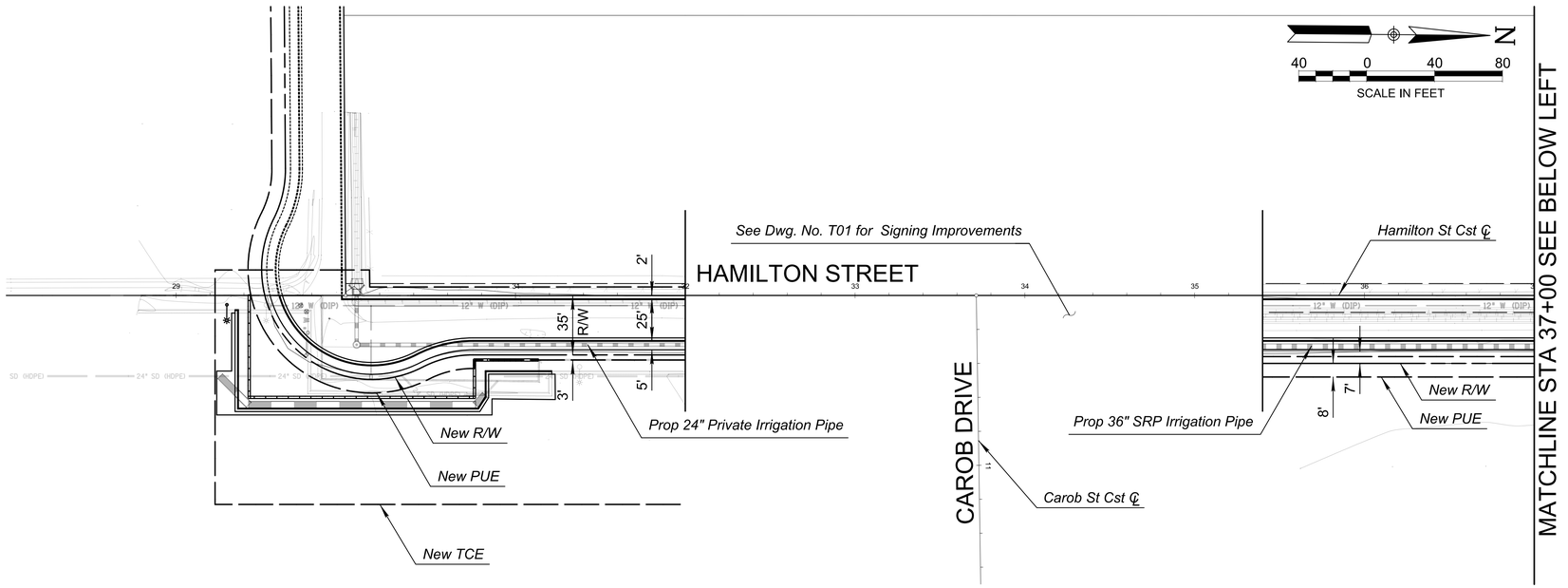
CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SIGNING
PLAN SHEET

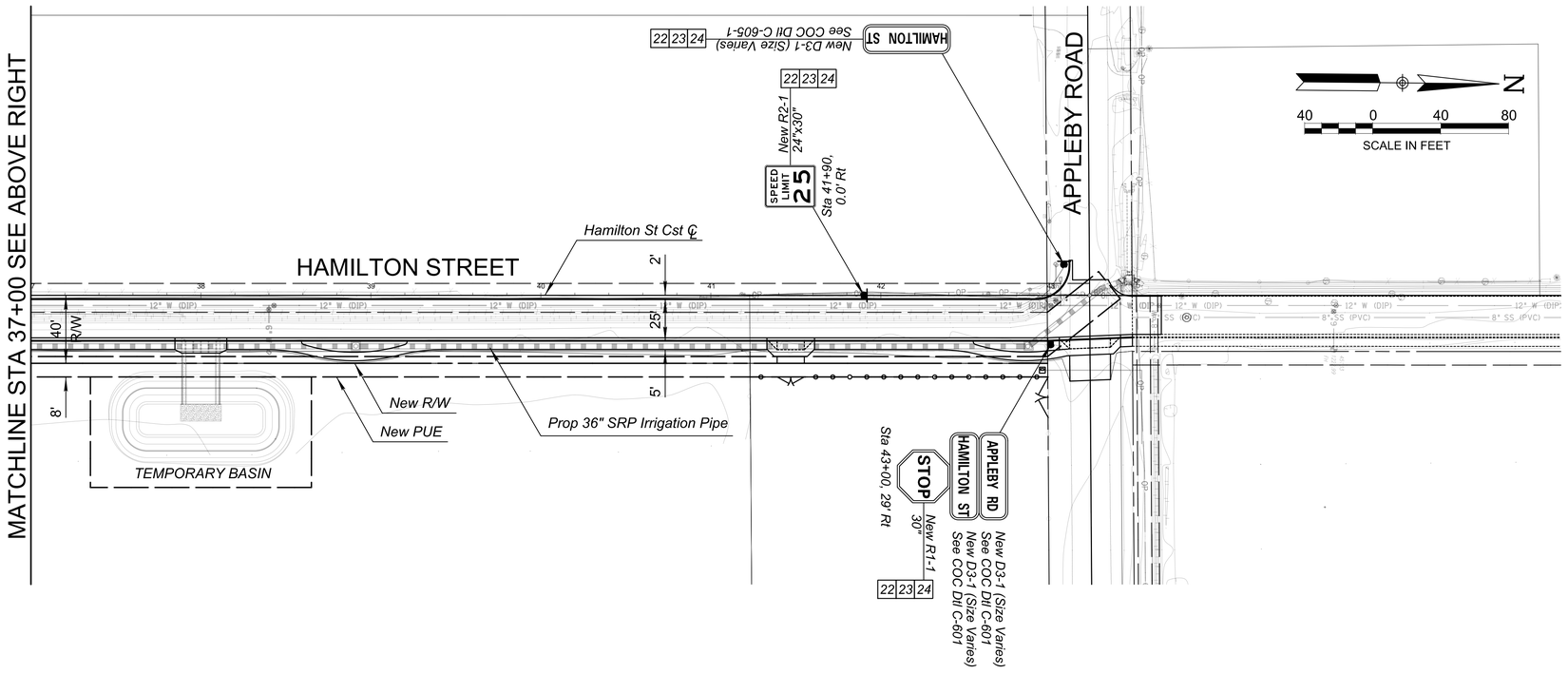
CITY PROJECT NO.
ST2007.401

DWG. NO.
T01

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C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS





CONSTRUCTION NOTES

NO	DESCRIPTION	UNIT	QTY
22	2" Perforated Sign Post per COC Dtl C-613	LF	34
23	Sign Panels	SF	21
24	Sign Foundation per COC Dtl C-613	EA	3

REMOVAL NOTES

NO	DESCRIPTION	UNIT	QTY

SHEET NOTES

1. Dimensions and Offsets are to the Back of Curb Unless Otherwise Noted.

M Match
P Protect
S Sawcut

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-8348)
In Maricopa County: (602) 263-1100

NO	DATE	BY

REVISIONS

NFra Inc.
a transportation engineering firm
77 East Thomas Road, Suite 200
Phoenix, Arizona 85012

REGISTERED PROFESSIONAL ENGINEER
50900
KEVIN R. THOMAS
Date Signed
ARIZONA U.S.A.
Expires 06/30/25

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SCALE (V):	N/A
DESIGNED BY:	KRT
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CITY OF CHANDLER
HAMILTON STREET IMPROVEMENTS
IRIS PLACE TO APPLEBY ROAD
SIGNING
PLAN SHEET

CITY PROJECT NO.
ST2007.401

DWG. NO.
T02

66 OF 89

C.O.C. LOG NO. CIV21-0015 HAMILTON STREET IMPROVEMENTS

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WATER SRP ENGINEERING

SALT RIVER PROJECT

IRRIGATION IMPROVEMENTS

SRP ENGINEERING FILE NO. 2100005

HAMILTON STREET IMPROVEMENTS

PHOENIX, ARIZONA

CUSTOMER: CITY OF CHANDLER, KIMBERLY MOON PE
TEL. (480) 782-3349

CUSTOMER'S ENGINEER: NFRA INC, KEVIN THOMAS.
TEL. (602) 443-6081

SRP DESIGNER: GARY W. BRUNO
TEL. (602) 236-5182

SRP INSPECTOR: JERRY CRAWFORD
TEL. (602) 236-5096

LEGEND

PLAN SYMBOLS

- BENCHMARK
- SECTION CORNER
- SURVEY POINT (CALLOUT)
- SECTION LINE
- CONSTRUCTION BASELINE
- PROPERTY OR RIGHT OF WAY LINE
- EASEMENT LINE
- CENTERLINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- SLIPFORM LINING
- EXISTING DITCH
- EXISTING PIPE
- PROPOSED PIPE
- EXISTING HEADWALL WITH AND WITHOUT SLIPFORM
- PROPOSED HEADWALL WITH SLIPFORM
- EXISTING HEADWALL/ TRASHRACK WITH AND WITHOUT SLIPFORM
- PROPOSED HEADWALL/ TRASHRACK WITH SLIPFORM
- EXISTING TURNOUT STRUCTURE
- PROPOSED TURNOUT STRUCTURE
- EXISTING MANHOLE
- PROPOSED MANHOLE
- FIRE HYDRANT
- WATER VALVE
- METER (WATER-W /GAS-G)
- W — WATER LINE
- S — SEWER LINE
- G — GAS LINE
- T — TELEPHONE (DUCT OR CABLE)
- E — UNDERGROUND ELEC (DUCT OR CABLE)
- MANHOLE (NON WUA)
- SD — STORM DRAIN
- CB — CATCH BASIN
- UTILITY POLE
- DOWN GUY
- FENCE (WOOD)
- FENCE (WIRE/NOT SPECIFIED)
- FENCE (MASONRY)
- PALM TREE
- TREE (TYPE)
- STUMP
- MB — MAIL BOX
- EXISTING FACILITIES (CALLOUT)
- PROPOSED FACILITIES (CALLOUT)

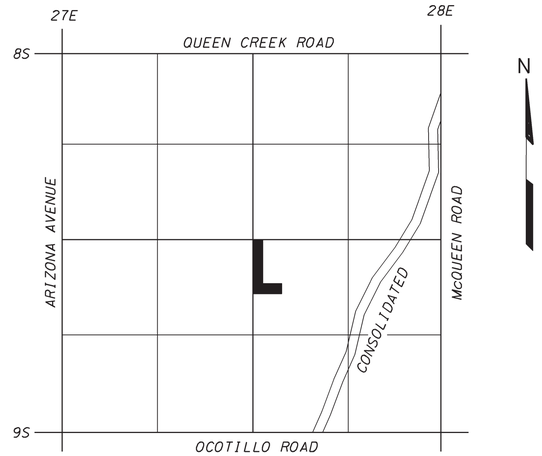
PROFILE SYMBOLS

- LOW BANK
- BED
- AVERAGE GROUND LEFT
- AVERAGE GROUND RIGHT
- AVERAGE GROUND (ONE GIVEN)
- HIGH WATER
- BED (PRIVATE DELIVERY)
- HIGH GROUND
- LOW GROUND
- CENTERLINE OF ROAD
- BED (DRAIN DITCH)
- CATCH BASIN
- PROPOSED UTILITY
- EXISTING UTILITY
- PH — POTHOLED UTILITY
- PROPOSED PIPE

GENERAL NOTES

1. THE CUSTOMER/CONTRACTOR IS RESPONSIBLE TO OBTAIN A PERMIT FOR WORK WITHIN PUBLIC AGENCY R/W AND ASSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL SAFETY AND ENVIRONMENTAL REGULATIONS.
2. THE WORK SPECIFIED ON THESE PLANS MAY INVOLVE THE USE OF AREAS LOCATED BOTH WITHIN SRP RIGHTS-OF-WAY AND PUBLIC AGENCY RIGHTS-OF-WAY. IF THE PUBLIC AGENCY ISSUES A PERMIT FOR WORK WITHIN ITS RIGHTS-OF-WAY, IT WILL APPLY ONLY TO THE AREA WITHIN THE PUBLIC AGENCY RIGHTS-OF-WAY. SUCH PERMIT SHALL NOT APPLY TO WORK WITHIN SRP RIGHTS-OF-WAY HAVING PRIOR RIGHTS.
3. THE CONTRACTOR SHALL CONTACT BLUE STAKE AT (602) 263-1100 AND SUCH OTHER LOCATORS/UTILITIES AS NECESSARY TO LOCATE AND FLAG ALL EXISTING UNDERGROUND UTILITIES BEFORE FIELD CONSTRUCTION BEGINS.
4. THE CUSTOMER'S CONTRACTOR IS REQUIRED TO CALL THE SRP INSPECTOR FOR A PRECONSTRUCTION CONFERENCE IN ACCORDANCE WITH THE APPLICABLE SRP LICENSE OR CONSTRUCTION AGREEMENT BEFORE OBTAINING CONSTRUCTION CLEARANCE AND STARTING CONSTRUCTION. CONTRACTOR MUST SIGN A TEMPORARY IRRIGATION OUTAGE AGREEMENT, IF REQUIRED, BEFORE CONSTRUCTION CAN BEGIN.
5. ALL CONSTRUCTION WATER AND POWER SHALL BE OBTAINED, HANDLED, AND PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO PROCURE AND TRANSPORT WATER TO THE CONSTRUCTION SITE. ALL TEMPORARY FACILITIES SHALL BE REMOVED BEFORE FINAL ACCEPTANCE BY SRP.
6. ANY QUESTIONS RELATIVE TO THE ACCURACY OF THE IMPROVEMENT INSTALLATION SHALL BE SUBMITTED IN WRITING IMMEDIATELY AND BEFORE COMPLETION OF THE WORK IF ALL SURVEY STAKES ARE MAINTAINED INTACT AS ORIGINALLY PLACED. SHOULD SUCH STAKES NOT BE PRESENT AND VERIFIED AS TO THEIR ORIGIN, NO CLAIM FOR ADDITIONAL COMPENSATION FOR CORRECTION SHALL BE PRESENTED TO ANY PARTY AND SUCH WORK SHALL BE CORRECTED AND PAID FOR BY THE CONTRACTOR.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES AND ANY OTHER ITEMS AFFECTING THE BID TO COMPLETE THE WORK SHOWN ON THE PLANS, AND TO BASE THE BID SOLELY UPON VERIFIED QUANTITIES, IRRESPECTIVE OF THE INFORMATION FURNISHED AS NOTED ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SRP INSPECTOR BEFORE CONSTRUCTION, OF ANY SIGNIFICANT DISCREPANCIES BETWEEN THE CONTRACTOR'S ESTIMATED QUANTITIES AND THOSE SHOWN ON THE PLANS.
8. THE CUSTOMER IS RESPONSIBLE FOR CLEARING THE PROPOSED SRP IRRIGATION SYSTEM ALIGNMENT BEFORE SRP CONSTRUCTION BEGINS. CLEARING SHALL INCLUDE REMOVAL OF PAVEMENT, CURBS, GUTTERS, SIDEWALKS, SIGNS, UTILITY POLES, STREETLIGHTS, FENCING AND ANY OTHER EXISTING CONFLICTS.
9. CONTACT SRP CUSTOMER SERVICE AT (602) 236-8888 FOR REQUIREMENTS FOR PROTECTING, RELOCATING OR REMOVING SRP POWER POLES (INCLUDING DOWN GUYS), UNDERGROUND POWER LINES AND OTHER ELECTRICAL EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR ALL COSTS OF COMPLYING WITH THESE REQUIREMENTS.
10. FOR IRRIGATION OUTAGE INFORMATION, CONTACT THE SRP INSPECTOR.
11. IF THERE ARE CONFLICTS BETWEEN SRP'S PLANS AND SPECIFICATIONS AND LOCAL GOVERNING REQUIREMENTS, THE MOST STRINGENT REQUIREMENT SHALL APPLY, AS DETERMINED BY THE SRP INSPECTOR.
12. ALL TRENCHING SHALL BE DONE IN ACCORDANCE WITH OSHA CONSTRUCTION STANDARDS FOR EXCAVATIONS.
13. BACKFILL TO SPRING LINE AND HIGHER WITH MAG 728 1/2-SACK CLSM (SRP 00-0104) MEETING SPECIFICATION SRP 02227. REMAINING BACKFILL PER SPECIFICATION SRP 02224 OR MUNICIPALITY/OWNER REQUIREMENTS, WHICH-EVER IS MORE STRINGENT AND APPROVED BY ENGINEER.
14. ALL DELIVERY STRUCTURES WILL BE INSTALLED BY SRP FORCES. ALLOW A MINIMUM OF 30 DAYS BETWEEN ISSUANCE OF THE SRP LICENSE OR NOTICE TO PROCEED, AND THE INSTALLATION OF THE STRUCTURE.
15. SRP WILL PROVIDE STUBOUT FOR PRIVATE CONNECTION. CUSTOMER IS RESPONSIBLE FOR DESIGN, CONSTRUCTION, AND CONNECTION OF PRIVATE IRRIGATION FACILITIES. CONNECTION TO SRP STUBOUT SHALL BE MADE USING MAG STANDARD IRRIGATION STAND PIPE (MAG 503), JUNCTION BOX (MAG 504), OR HEADWALL (MAG 501-1). JUNCTION BOX AND HEADWALL SHALL PROJECT MINIMUM 12" ABOVE FINISH GRADE. CUSTOMER SHALL COMPLETE CONNECTION TO SRP STUBOUT PRIOR TO DATE SET BY SRP FOR SYSTEM ACTIVATION.
16. BEDDING MATERIAL MAG 702 ABC (SRP 00-0113), PLACED PER SPECIFICATION SRP 02210 AT MINIMUM 95% AND +/-3% MOISTURE CONTENT (ASTM D698).
17. ALL PRECAST CONCRETE PIPE SHALL BE IN ACCORDANCE WITH ASTM C76 CLASS III WALL B OR WALL C UNLESS OTHERWISE NOTED, AND MEET SRP SPECIFICATIONS FOR PRECAST PIPE.
18. ALL EXISTING IRRIGATION FACILITIES DISTURBED BY NEW CONSTRUCTION SHALL BE RECONSTRUCTED TO CURRENT SRP STANDARDS.
19. ALL WORK AND MATERIALS THAT DO NOT CONFORM TO THESE PLANS, SPECIFICATIONS AND SRP LICENSES/CONSTRUCTION AGREEMENTS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
20. ALL DUST AND TRAFFIC CONTROLS REQUIRED BY THE LOCAL GOVERNING AGENCY WILL BE OBTAINED, COORDINATED, AND PAID FOR BY THE CONTRACTOR.
21. SRP DOES NOT GUARANTEE THE LOCATION OR ELEVATION OF UTILITIES AND WILL NOT BE RESPONSIBLE FOR THEIR RELOCATION.
22. THE UTILITIES IDENTIFIED ON THE PLANS MAY NOT REPRESENT ALL EXISTING AND/OR CONFLICTING UTILITIES WITHIN THE PROJECT LIMITS.
23. ALL UTILITIES WHICH HAVE BEEN POTHOLED (GENERALLY ALL PIPES OR CONDUITS 2 INCHES OR LARGER IN DIAMETER AND ALL CABLES WITH 25 PAIRS OR GREATER) ARE DESIGNATED IN THE PROFILE WITH THE TERM "PH".
24. ALL UTILITIES MUST UNDERCROSS THE PROPOSED SRP PIPELINE AND MAINTAIN A MINIMUM CLEARANCE OF ONE FOOT, UNLESS NOTED OTHERWISE.
25. UTILITIES PARALLEL TO SRP IRRIGATION PIPE ARE REVIEWED ON A CASE-BY-CASE BASIS. LOCATE PARALLEL UTILITY OUT-SIDE OF AREA SRP EXCAVATES WHEN MAINTAINING IRRIGATION PIPE. TYPICAL EXCAVATION INCLUDES AREA ABOVE AND TO EACH SIDE OF SRP IRRIGATION PIPE. SIDE EXCAVATION IS 4'-0" FROM THE OUTSIDE DIAMETER OF THE SRP IRRIGATION PIPE.
26. LOCATION AND ELEVATION OF ALL BLUE STAKED UTILITIES ARE TO BE FIELD VERIFIED. ALL CONFLICTING UTILITIES ARE TO BE RELOCATED PRIOR TO SRP PIPE INSTALLATION. CONTACT THE UTILITY COMPANY FOR COST AND SCHEDULE REQUIREMENTS FOR RELOCATION.
27. VERTICAL CONTROLS ARE BASED ON SEA LEVEL DATUM AS DEFINED BY THE BENCHMARK ON EACH PLAN/PROFILE. VERTICAL CONTROLS MAY DIFFER BETWEEN PLAN/PROFILES. CHECK PLANS FOR ELEVATION EQUATIONS.
28. STATIONS SHOWN ON THE PLAN/PROFILE ARE ALONG THE SECTION LINE, UNLESS OTHERWISE NOTED.
29. DIMENSIONS LOCATING IRRIGATION MANHOLES AND DELIVERY STRUCTURES ARE FROM THE SECTION LINE TO THE CENTERLINE OF THE MANHOLE, AND TO THE FACE OF THE DELIVERY STRUCTURE RESPECTIVELY, UNLESS OTHERWISE NOTED.
30. FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL HORIZONTAL AND VERTICAL CONTROLS ARE LOCATED ONLY APPROXIMATELY AND WITH THE BEST AVAILABLE KNOWLEDGE.
31. ALL STAKING CONTROLS SHALL BE LEFT UNDISTURBED. THE CONTRACTOR SHALL CALL THE SRP INSPECTOR TO REFERENCE AND RESET ANY CONTROL POINTS THAT HAVE TO BE DISTURBED. THE CONTRACTOR WILL BE CHARGED FOR RESTAKING COSTS IF ANY STAKES ARE DESTROYED AND REQUIRE REPLACEMENT.
32. ELEVATIONS SHOWN FOR IRRIGATION MANHOLES ARE AT THE TOP OF THE PROPOSED SIDEWALK OR FINISHED ROADWAY GRADE AT THE CENTERLINE OF THE MANHOLE (TWO CORNER POINTS FOR THE 5-SIDED MANHOLE), UNLESS OTHERWISE NOTED. THE TOP OF THE MANHOLE SHALL BE STAKED BY THE CUSTOMER'S ENGINEER, AND THE HORIZONTAL OFFSET CHECKED TO VERIFY THAT THE LOCATION IS IN CONFORMANCE WITH THE LATEST REVISIONS TO THE GOVERNING AUTHORITY'S PAVING PLANS. ALL OTHER SRP IRRIGATION STAKING SHALL BE BY SRP FORCES, UNLESS OTHERWISE NOTED.
33. THE CUSTOMER'S ENGINEER SHALL VERIFY OR RE-ESTABLISH SECTION CORNERS TO BE USED AS THE BASELINE FOR IRRIGATION FACILITIES AND ALSO STAKE RIGHT-OF-WAY LINES AND TEMPORARY CONSTRUCTION AND PERMANENT EASEMENT LINES. SIDEWALKS AND BACK OF CURBS SHALL BE STAKED AT PROPOSED SRP MANHOLES AND STRUCTURES. ALL STAKING SHALL BE DONE PRIOR TO SRP STAKING NEW IRRIGATION FACILITIES. THE CUSTOMER'S ENGINEER SHALL MAINTAIN REFERENCE STAKES AS REQUIRED FOR THE DURATION OF SRP IRRIGATION SYSTEM CONSTRUCTION.

KEY PLAN



PLAN INDEX

PLAN/PROFILE(S) SHEET [2] THRU SHEET [4]
MANHOLE DETAIL(S) SHEET [5]
FIVE-SIDED MANHOLE(S) SHEET [6]
HEADWALL W/TRASHRACK(S) SHEET [7]
TURNOUT STRUCTURE(S) DETAILS SHEET [8] THRU SHEET [14]

REV NO	DATE	DFTR	DSGN	ENGR CHK	SUPV APPD	ISSUE AUTH
21	10.26.20	JWS	-	BRM	AWJ	AWJ
	REVISED NOTE 24 FROM TWO FEET TO ONE FOOT. UPDATED LANGUAGE ON NOTE 25.					
20	02.12.19	JWS	HAS	HAS	-	REL
	UPDATED LANGUAGE ON NOTES 13, 16, 24 & 25.					

FORM NO

IRRIGFS.WDF

WDF-IRRIGFS

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DESIGN FOR CONSTRUCTION

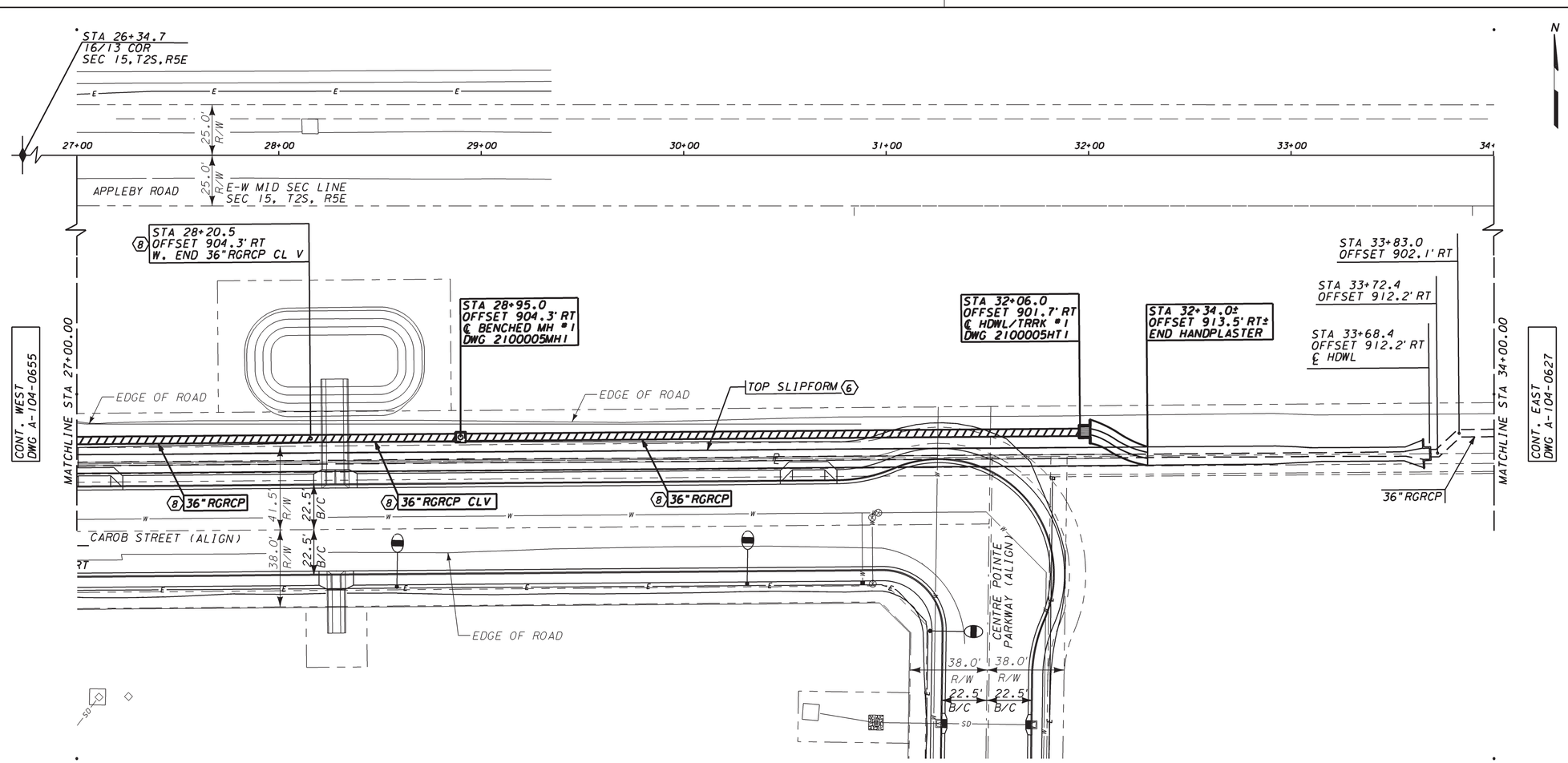
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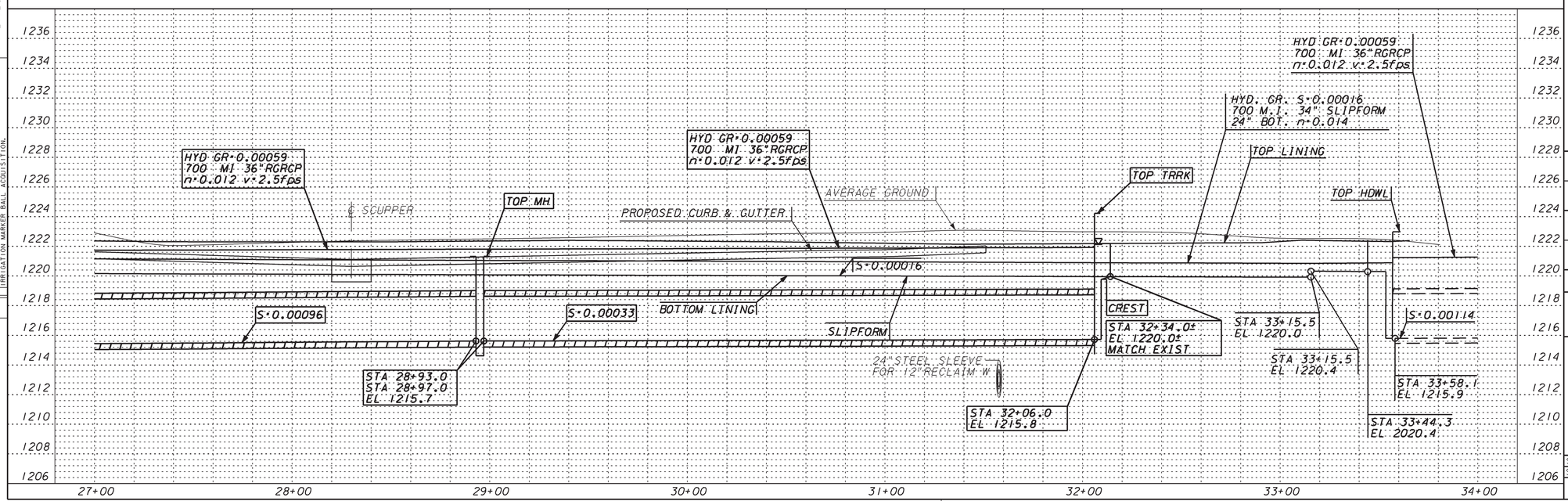
SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4 SEC 15, T2S, R5E

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SUBJ CODE	DIST CODE	DWG SIZE	2100005FSH	1
CV	Y3	22X34		

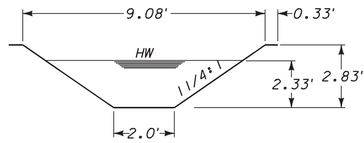
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REF #3:
REF #4:





CONSTRUCTION NOTES

1. THE GENERAL NOTES ON THE COVER SHEET INCLUDE ADDITIONAL REQUIREMENTS RELATING TO THIS WORK.
6. CUSTOMER SHALL REMOVE AND PROPERLY DISPOSE OF EXISTING SRP CONCRETE DITCH LINING. AFTER REMOVING LINING, BACKFILL DITCH TO DESIGN GRADE.
8. STANDARD SRP IRRIGATION MARKER BALLS, (STOCK CODE No. 5011771), SHALL BE INSTALLED BY THE CUSTOMER'S CONTRACTOR, AS DIRECTED BY SRP, BETWEEN STATION 27+00.0 AND STATION 32+34.0± AND AT OTHER PIPE LOCATIONS AS INDICATED. PLACE BALLS AT EVERY ANGLE POINT, AT 100' INTERVALS ALONG STRAIGHT RUNS, 50' INTERVALS ON CURVED RUNS, AT BURIED END POINTS, AND 3' BELOW THE SURFACE OR ON TOP OF THE PIPE/COLLAR (EMBED IN WET CONCRETE), WHICHEVER IS SHALLOWER. CONTACT SRP WATER INSPECTOR TO RECEIVE THE SRP IRRIGATION MARKER BALLS.



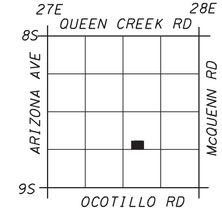
CROSS SECTION (NTS)

STA 27+00.0 TO STA 33+68.4
700 M.I. DESIGN CAPACITY
2" CONC THICKNESS
REFERENCE DWG. C-8-9

ELEVATION EQUATION:
SRP ELEVATION
PLUS 1.42' EQUALS
DEVELOPER DATUM

STATION EQUATION:
S-N ALONG HAMILTON:
SRP STATION PLUS
1677.18 EQUALS
DEVELOPER STATION

LOCATION PLAN



BENCHMARK:
STA 26+34.70,
OFFSET 0.15'
BRASS CAP IN HH
ELE 1221.57'

REV NO	JOB/LOG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH	
10	-	01.15.18	JWS	JWS	-	-	REL	REVISED NOTE 5 TO INCLUDE PLUGGING OF PIPE LANGUAGE.
9	-	06.28.16	JWS	JWS	-	-	REL	REVISED NOTE 8 STOCK CODE REFERENCE AND CONTACT FOR IRRIGATION MARKER BALL ACQUISITION.

FORM NO

WDF-PPSNG

PPSNG.WDF

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SRP SURVEY W1391212-017 AND CUSTOMER PLANS.
DESIGN STA 27+00.0 TO STA 32+34.0±

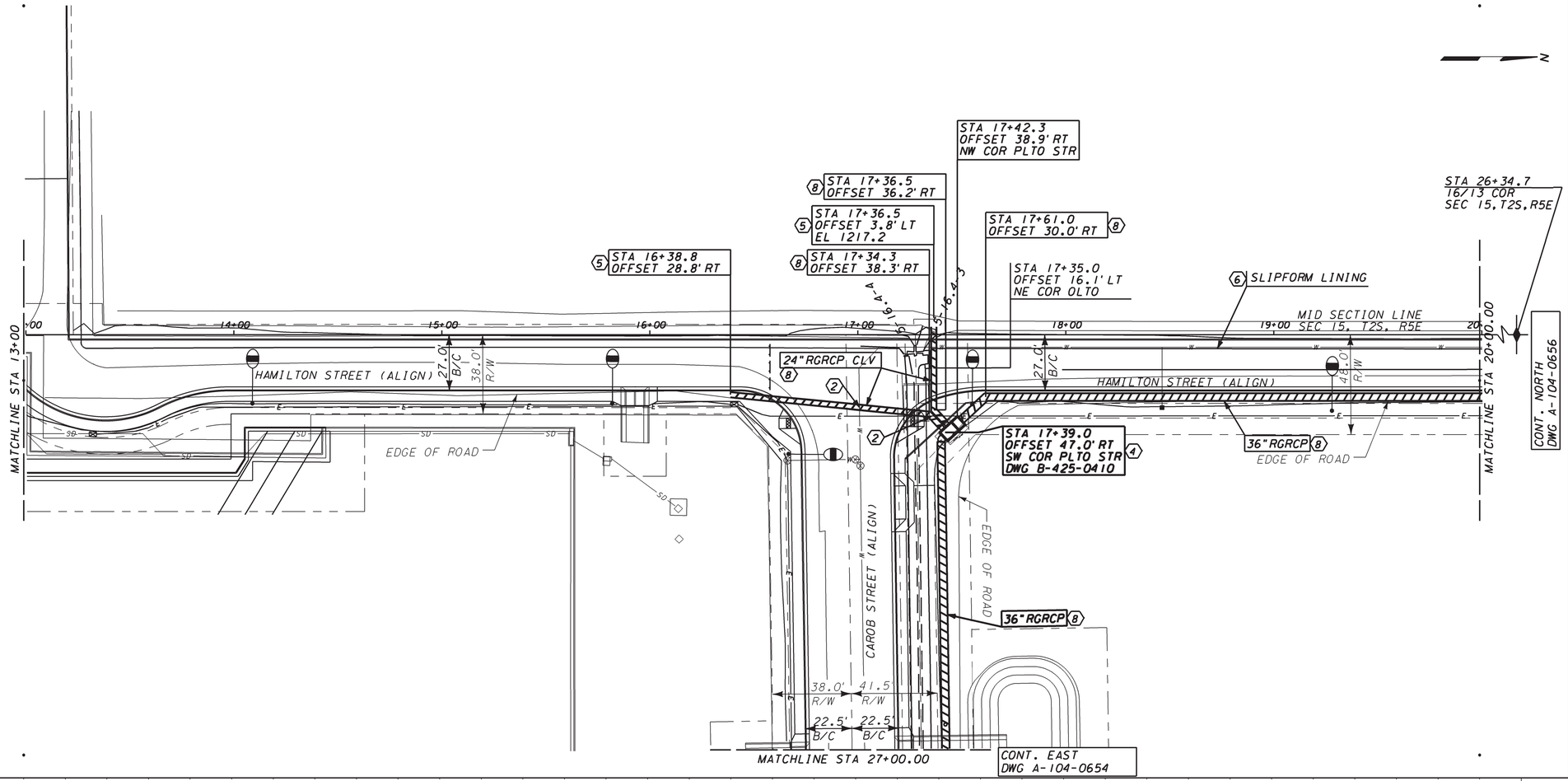
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		RFR	GWB	BRM	AWJ	

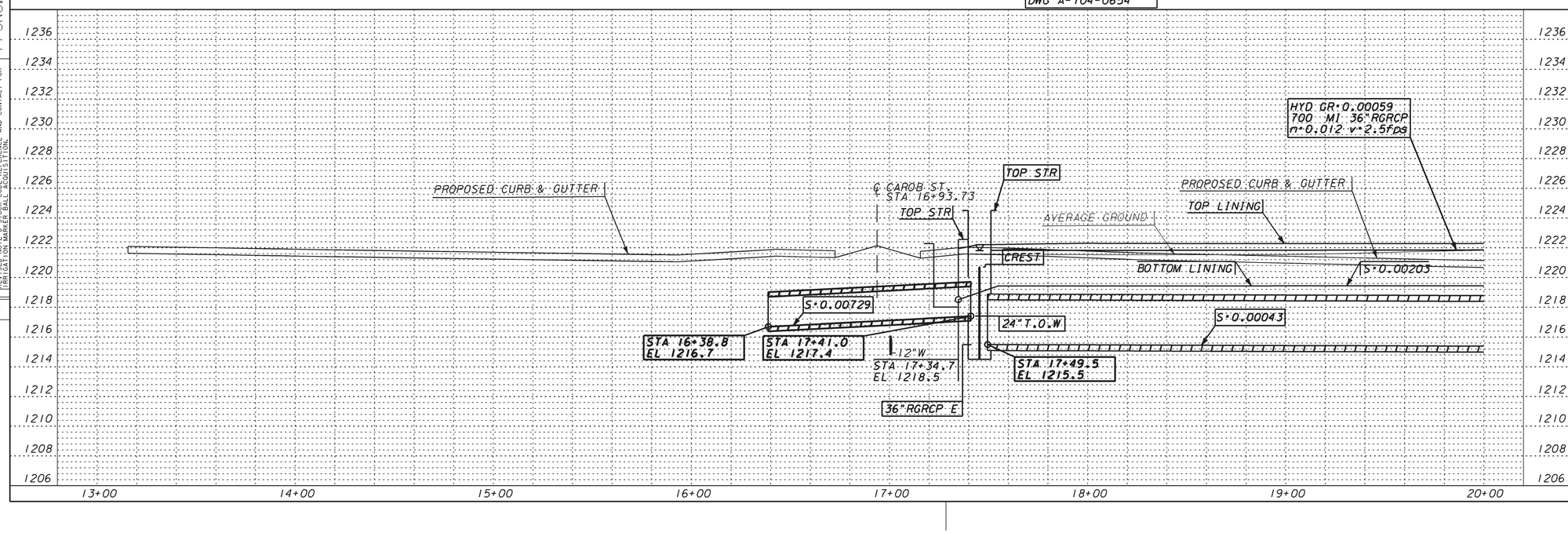
SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4 SEC 15, T2S, R5E 700' EAST OF 16/16 COR TO 700' EAST

SCALE: PLAN 1"=30', PROFILE 1"=4'			A1040654.DGN	SHEET NO.
SUBJ CODE	DIST CODE	DWG SIZE		
PP	Y2	22X34	A-104-0654	2

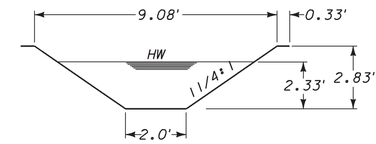
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REF #1: 2100005BM.DGN
REF #2: 2100005BM.DGN
REF #3:
REF #4:





CONSTRUCTION NOTES

1. THE GENERAL NOTES ON THE COVER SHEET INCLUDE ADDITIONAL REQUIREMENTS RELATING TO THIS WORK.
2. UTILITY CROSSING/PARALLEL - SEE THE GENERAL NOTES CONCERNING BLUE STAKING EXISTING UTILITIES, MINIMUM CLEARANCES FROM SRP IRRIGATION FACILITIES, AND RELOCATING CONFLICTING UTILITIES.
4. TURNOUT STRUCTURES AND PIPE STUBOUTS TO BE CONSTRUCTED BY SRP.
5. PRIVATE IRRIGATION SYSTEM CONNECTION TO BE DESIGNED AND CONSTRUCTED BY CUSTOMER. SRP TO PLUG PIPE IF CONNECTION TO PRIVATE IRRIGATION SYSTEM IS NOT MADE DURING SAME DRY-UP USED FOR INSTALLATION OF SRP DELIVERY STRUCTURE.
6. CUSTOMER SHALL REMOVE AND PROPERLY DISPOSE OF EXISTING SRP CONCRETE DITCH LINING. AFTER REMOVING LINING, BACKFILL DITCH TO DESIGN GRADE.
8. STANDARD SRP IRRIGATION MARKER BALLS, (STOCK CODE No. 5011771), SHALL BE INSTALLED BY THE CUSTOMER'S CONTRACTOR, AS DIRECTED BY SRP, BETWEEN STATION 16 +38.8 AND STATION 20 +00.0 AND AT OTHER PIPE LOCATIONS AS INDICATED. PLACE BALLS AT EVERY ANGLE POINT, AT 100' INTERVALS ALONG STRAIGHT RUNS, 50' INTERVALS ON CURVED RUNS, AT BURIED END POINTS, AND 3' BELOW THE SURFACE OR ON TOP OF THE PIPE/COLLAR (EMBED IN WET CONCRETE), WHICHEVER IS SHALLOWER. CONTACT SRP WATER INSPECTOR TO RECEIVE THE SRP IRRIGATION MARKER BALLS.



CROSS SECTION (NTS)

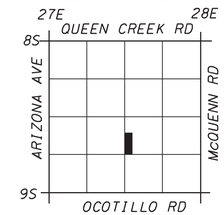
STA 17+45.0 TO STA 20+00.0
700 M.I. DESIGN CAPACITY
2" CONC THICKNESS
REFERENCE DWG. C-8-9

ELEVATION EQUATION:
SRP ELEVATION
PLUS 1.42' EQUALS
DEVELOPER DATUM

STATION EQUATION:
S-N ALONG HAMILTON:
SRP STATION PLUS
1677.18 EQUALS
DEVELOPER STATION

BENCHMARK:
STA 26+34.70,
OFFSET 0.15'
BRASS CAP IN HH
ELE 1221.57'

LOCATION PLAN



REV NO.	JOB/LOG NO.	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH
10	-	01.15.18	JWS	JWS	-	-	REL
FORM NO	REVISED NOTE 5 TO INCLUDE PLUGGING OF PIPE LANGUAGE.						
9	-	06.28.16	JWS	-	-	-	REL
	REVISED NOTE 8, STOCK CODE, REFERENCE AND CONTACT FOR IRRIGATION MARKER BALL ACQUISITION.						

PPSNG.WDF

WDF-PPSNG

/ /

SRP SURVEY W139121-017 AND CUSTOMER PLANS.
DESIGN FROM STA 16+38.8 TO STA 20+00.0.

0	2100005	RFR	GWB	BRM	AWJ	11/08/22
		RFR	GWB	BRM	AWJ	
REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4
SEC 15, T2S, R5E
1300' S/O 16/13 COR TO 700' NORTH

SCALE: PLAN 1"=30', PROFILE 1"=4'	A1040655.DGN	SHEET NO.
SUBJ CODE	DIST CODE	DWG SIZE
PP	Y2	22X34

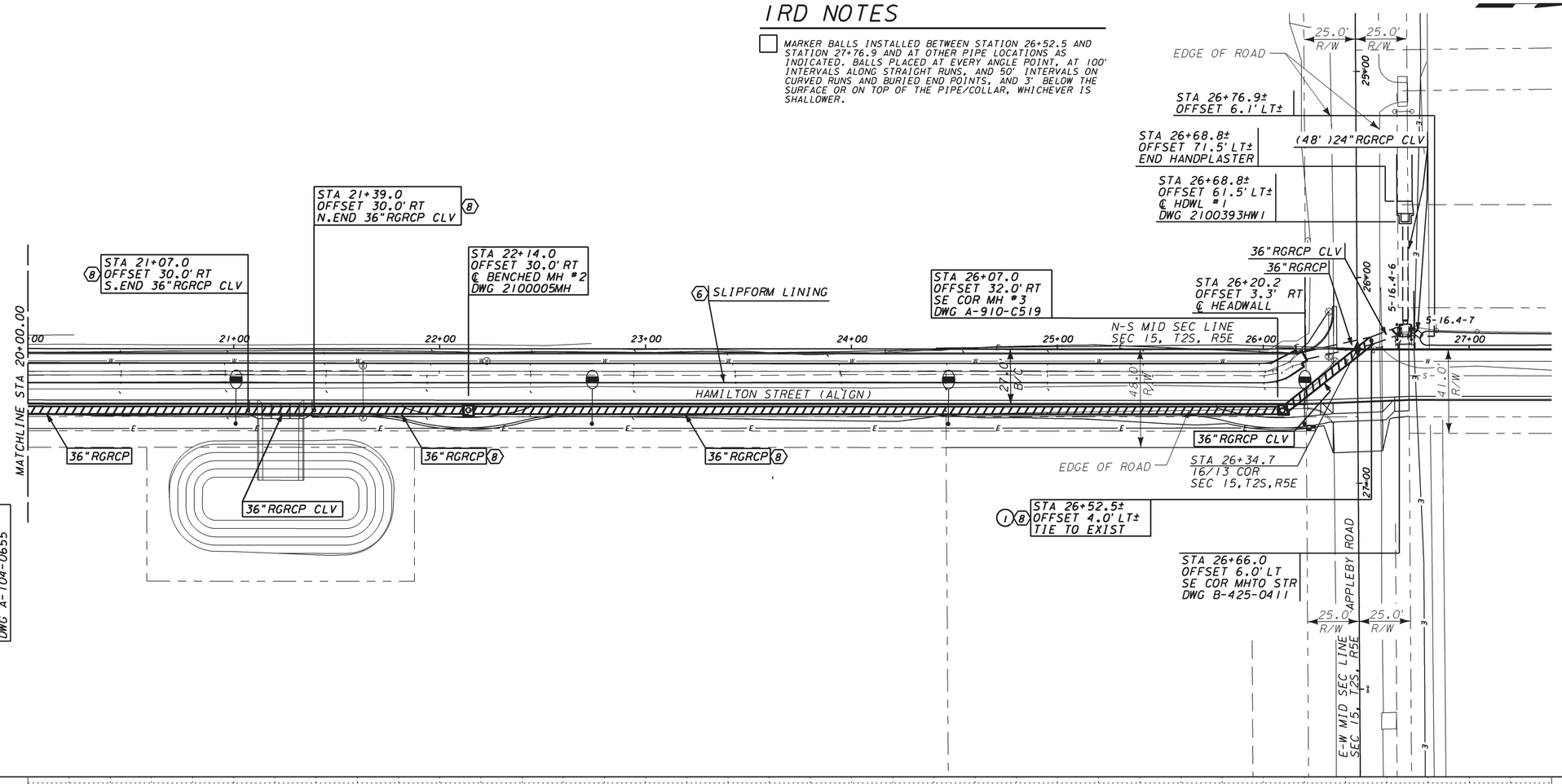
A-104-0655 | 3

REFERENCE FILES USED:
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REF #2: 2100005BM.DGN
REF #3:
REF #4:

CONT. SOUTH
DWG A-104-0655

IRD NOTES

☐ MARKER BALLS INSTALLED BETWEEN STATION 26+52.5 AND STATION 27+76.9 AND AT OTHER PIPE LOCATIONS AS INDICATED. BALLS PLACED AT EVERY ANGLE POINT, AT 100' INTERVALS ALONG STRAIGHT RUNS, AND 50' INTERVALS ON CURVED RUNS AND BURIED END POINTS, AND 3' BELOW THE SURFACE OR ON TOP OF THE PIPE/COLLAR, WHICHEVER IS SHALLOWER.

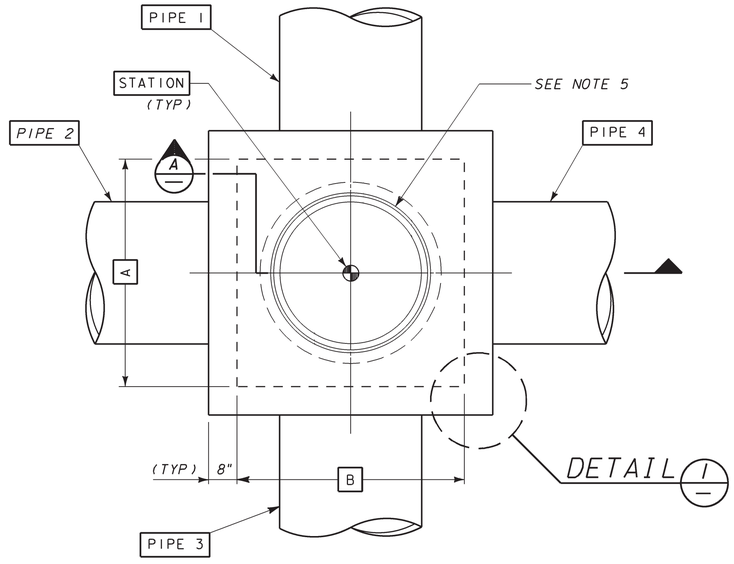

N
MATCHLINE STA 20+00.00
STA 21+07.0
OFFSET 30.0' RT
S.END 36"RGRCP CLV
8
STA 21+39.0
OFFSET 30.0' RT
N.END 36"RGRCP CLV
8
STA 22+14.0
OFFSET 30.0' RT
℄ BENCHED MH #2
DWG 2100005MH
6 SLIPFORM LINING
STA 26+07.0
OFFSET 32.0' RT
SE COR MH #3
DWG A-910-C519
N-S MID SEC LINE
SEC 15, T2S, R5E
HAMILTON STREET (ALIGN)
27.0' B/C
48.0' R/W
41.0' R/W
36"RGRCP
36"RGRCP 8
36"RGRCP 8
36"RGRCP CLV
EDGE OF ROAD
STA 26+34.7
16/13 COR
SEC 15,T2S,R5E
1 8
STA 26+52.5±
OFFSET 4.0' LT±
TIE TO EXIST
STA 26+66.0
OFFSET 6.0' LT
SE COR MHTO STR
DWG B-425-0411
E-W MID SEC LINE
SEC 15, T2S, R5E
APPLEBY ROAD
25.0' R/W
25.0' R/W
EDGE OF ROAD
STA 26+76.9±
OFFSET 6.1' LT±
STA 26+68.8±
OFFSET 71.5' LT±
END HANDPLASTER
STA 26+68.8±
OFFSET 61.5' LT±
℄ HDWL #1
DWG 2100393HW1
(48')24"RGRCP CLV
36"RGRCP CLV
36"RGRCP
STA 26+20.2
OFFSET 3.3' RT
℄ HEADWALL
5-16.4-6
5-16.4-7
29+00
28+00
27+00
26+00
25+00
24+00
3
3
3

MANHOLE CONSTRUCTION DATA

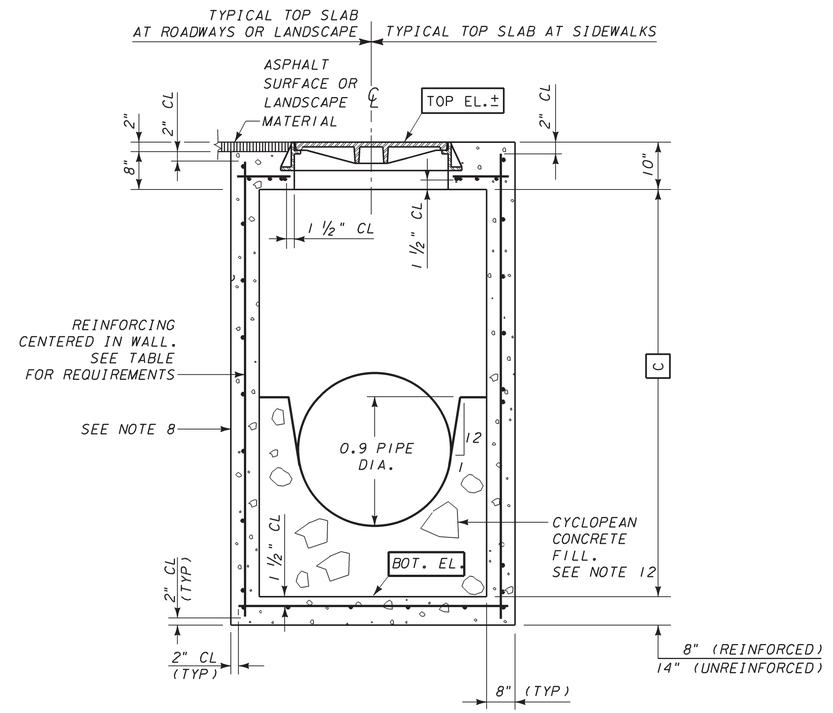
MANHOLE NUMBER	STATION (SEE NOTE 4)	REFERENCE DRAWING	TOP EL.± (SEE NOTE 6)	BOT. EL.	PIPE 1 TYPE	PIPE 1 INV. EL.	PIPE 2 TYPE	PIPE 2 INV. EL.	PIPE 3 TYPE	PIPE 3 INV. EL.	PIPE 4 TYPE	PIPE 4 INV. EL.	MANHOLE DIMENSIONS (SEE NOTE 9) A	B	C	MANHOLE LOCATION ROADWAY	MANHOLE LOCATION SIDEWALKS/ LANDSCAPE
1	28+95.0	A-104-0654	1221.4	1214.7	--------	------	36"RGRCP CLASS V	1215.7	--------	------	36"RGRCP	1215.7	48"	48"	70 1/2"	-	X
2	22+14.0	A-104-0656	1221.0	1214.3	--------	------	36"RGRCP	1215.3	--------	------	36"RGRCP	1215.3	48"	48"	70 1/2"	-	X

MINIMUM REQUIREMENTS

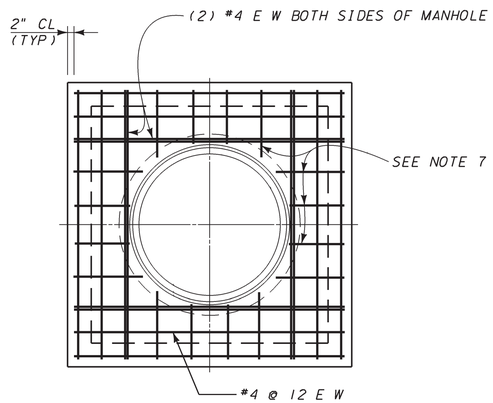
WALL LENGTH PIPE DIAMETER	WALL LENGTH A OR B	REINFORCING STEEL
36" OR LESS	48"	#4 @ 12" E.W. OR (1) LAYER 6x6-W5.5xW5.5 WWF
42"	56"	
48"	68"	
54" OR 60"	80"	#4 @ 12" E.W. OR 6x6-W10xW10 WWF
66" OR 72"	92"	
78" OR 84"	104"	



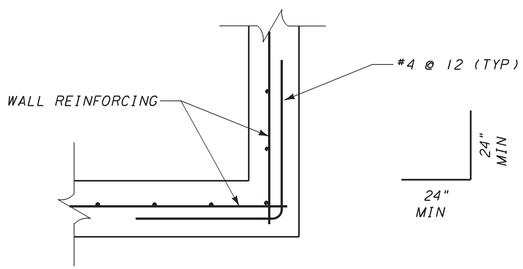
PLAN



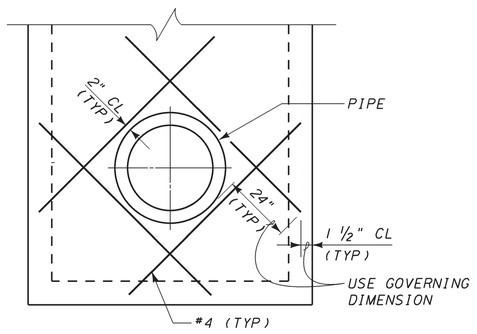
SECTION A



TOP SLAB REINFORCING PLAN



DETAIL 1



NOTE: MAIN WALL REINFORCING NOT SHOWN.

SECTION B

DESIGN CRITERIA

HS20 HIGHWAY LOADING, 32 KIPS ON REAR AXLE (16 KIPS/WHEEL), WHEEL SPACING 6', 30% IMPACT. ONE WHEEL CENTERED ON MANHOLE, OTHER WHEEL ADJACENT TO MANHOLE.

NOTES

1. STRUCTURAL CONCRETE SHALL BE 3000 PSI @ 28 DAYS (MAG A) PER SRP 03300.
2. REINFORCING STEEL SHALL COMPLY WITH REQUIREMENTS OF SRP 03210; BARS SHALL BE ASTM A615 GRADE 60 AND WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
3. CONCRETE PLACEMENT SHALL BE PER GE 03305.
4. SEE PLAN AND PROFILE DRAWING FOR CORRECT ORIENTATION OF MANHOLE.
5. STANDARD SRP 30" CAST IRON MANHOLE FRAME AND COVER (STOCK CODE No. 5011703) CENTERED IN TOP OF MANHOLE. CONTACT SRP INVESTMENT RECOVERY DEPARTMENT AT (602) 236-2908, TO PURCHASE SRP MANHOLE FRAME AND COVER.
6. NOT TO BE USED FOR STAKING. EXACT TOP ELEVATION TO BE SET BY CUSTOMER'S ENGINEER BASED ON CUSTOMER'S PAVING & GRADING PLANS.
7. FIELD CUT REBAR AT MANHOLE.
8. CONCRETE SHALL BE PLACED WITH NO COLD JOINTS. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
9. DIMENSIONS A AND B SHALL NOT EXCEED 104", AND DIMENSION C SHALL NOT EXCEED 180".
10. FOR PRESSURE MANHOLES, MAXIMUM HEAD SHALL NOT EXCEED 60" ABOVE TOP ELEVATION.
11. PROVIDE ASPHALT SURFACE AS REQUIRED.
12. CYCLOPEAN CONCRETE FILL SHALL BE 2000 PSI @ 28 DAYS (MAG C) PER SRP 03300 WITH RANDOM PLACEMENT OF COBBLES, BRICKS, CONCRETE MASONRY UNITS OR SIMILIAR NON-DELETERIOUS SOLID MATERIALS.

REFERENCES

REINFORCING SPECIFICATION _____ SRP 03210
CONCRETE SPECIFICATION _____ SRP 03300
CONCRETE PLACEMENT SPECIFICATION ___ GE 03305

REV NO	JOB/LOG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH
12	-	01.20.15	JWS	-	-	-	REL
UPDATED MH STOCK CODE NUMBER FROM 004-024 TO 5011703.							
11	-	09/26/07	JWS	CWT	CWT	-	REL
ADDED NOTE 12, AND REVISED ASSOCIATED CALLOUTS.							

FORM NO WDF-NEWMH

NEWMH.WDF

DESIGNED FOR CONSTRUCTION

0	2100005	GWB	GWB	BRM	AWJ	11/08/22
		GWB	GWB	BRM	AWJ	
REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE

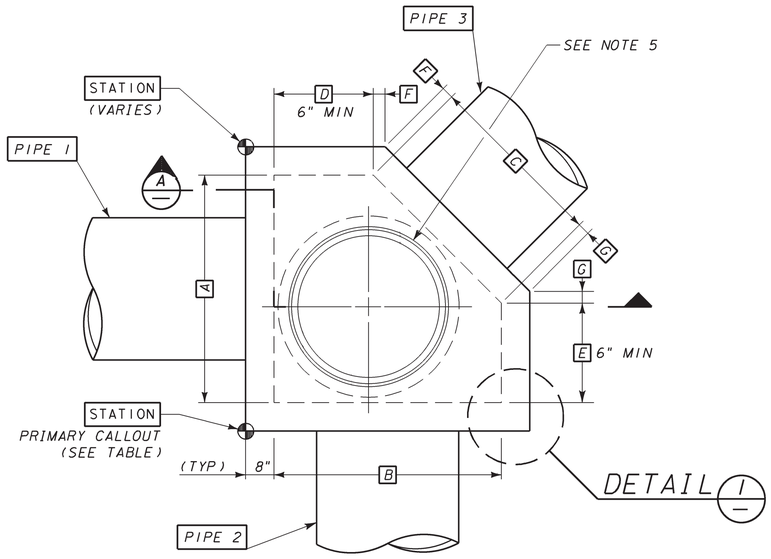
SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

MANHOLE PLANS, SECTIONS AND DETAILS

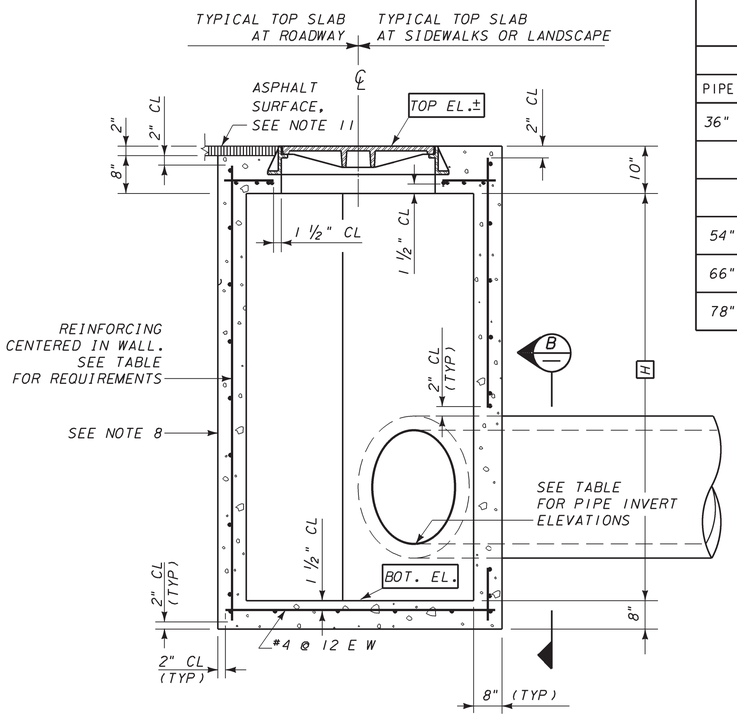
SCALE: NONE			TEMPORARY - 2100005MH1.DGN	SHEET NO.
SUBJ CODE	DIST CODE	DWG SIZE	2100005MH1	5
MH	Y3	22X34		

MANHOLE CONSTRUCTION DATA

MANHOLE NUMBER	STATION (SEE NOTE 4)	REFERENCE DRAWING	TOP EL.± (SEE NOTE 6)	BOT. EL.	PIPE 1 TYPE	PIPE 1 INV. EL.	PIPE 2 TYPE	PIPE 2 INV. EL.	PIPE 3 TYPE	PIPE 3 INV. EL.	MANHOLE DIMENSIONS (SEE NOTE 9) A	B	C	D	E	F	G	H	MANHOLE LOCATION ROADWAY	SIDEWALKS/ LANDSCAPE
3	26+07.0	A-104-0656	1222.2	1214.0	36"RGRCP	1215.0	--------	------	36"RGRCP CLASS V	1216.6	48"	54"	48"	30"	6 3/8"	4 5/8"	2 1/4"	88 1/2"	-	X



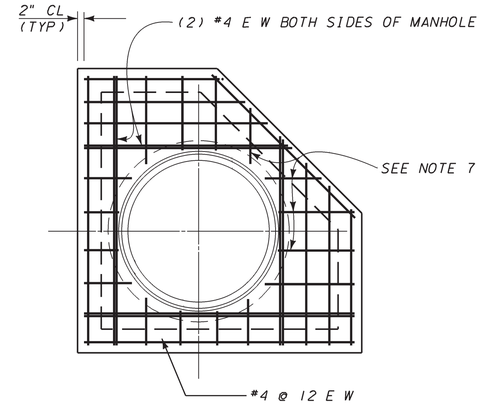
PLAN



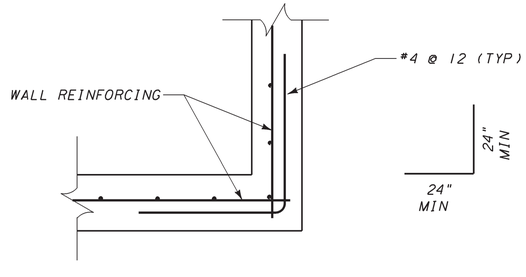
SECTION A

MINIMUM REQUIREMENTS

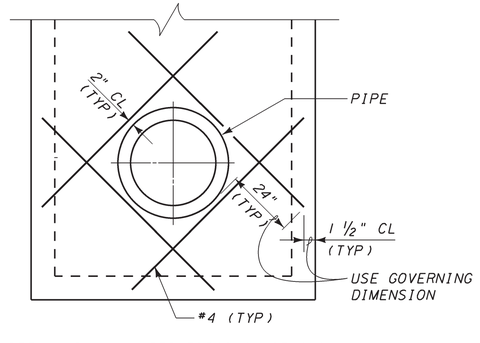
WALL LENGTH		REINFORCING STEEL
PIPE DIAMETER	A, B & C	
36" OR LESS	48"	#4 @ 12" E.W. OR (1) LAYER 6x6-W5.5xW5.5 WWF
42"	56"	
48"	68"	
54" OR 60"	80"	#4 @ 12" E.W. OR 6x6-W10xW10 WWF
66" OR 72"	92"	
78" OR 84"	104"	



TOP SLAB REINFORCING PLAN



DETAIL 1



NOTE: MAIN WALL REINFORCING NOT SHOWN.

SECTION B

DESIGN CRITERIA

HS20 HIGHWAY LOADING, 32 KIPS ON REAR AXLE (16 KIPS/WHEEL), WHEEL SPACING 6', 30% IMPACT. ONE WHEEL CENTERED ON MANHOLE, OTHER WHEEL ADJACENT TO MANHOLE.

NOTES

1. STRUCTURAL CONCRETE SHALL BE 3000 PSI @ 28 DAYS (MAG A) PER SRP 03300.
2. REINFORCING STEEL SHALL COMPLY WITH REQUIREMENTS OF SRP 03210; BARS SHALL BE ASTM A615 GRADE 60 AND WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
3. CONCRETE PLACEMENT SHALL BE PER GE 03305.
4. SEE PLAN AND PROFILE DRAWING FOR CORRECT ORIENTATION OF MANHOLE.
5. STANDARD SRP 30" CAST IRON MANHOLE FRAME AND COVER (STOCK CODE No. 5011703) CENTERED IN TOP OF MANHOLE. CONTACT SRP INVESTMENT RECOVERY DEPARTMENT AT (602) 236-2908, TO PURCHASE SRP MANHOLE FRAME AND COVER.
6. NOT TO BE USED FOR STAKING. EXACT TOP ELEVATION TO BE SET BY CUSTOMER'S ENGINEER BASED ON CUSTOMER'S PAVING & GRADING PLANS.
7. FIELD CUT REBAR AT MANHOLE.
8. CONCRETE SHALL BE PLACED WITH NO COLD JOINTS. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
9. DIMENSIONS A, B & C SHALL NOT EXCEED 104", AND DIMENSION H SHALL NOT EXCEED 180".
10. FOR PRESSURE MANHOLES, MAXIMUM HEAD SHALL NOT EXCEED 60" ABOVE TOP ELEVATION.
11. PROVIDE ASPHALT SURFACE AS REQUIRED.

REFERENCES

REINFORCING SPECIFICATION _____ SRP 03210
CONCRETE SPECIFICATION _____ SRP 03300
CONCRETE PLACEMENT SPECIFICATION ___ GE 03305

REV NO.	JOB/LOG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH	
8	-	01.20.15	JWS	-	-	-	REL	UPDATED MH STOCK CODE NUMBER FROM 004-024 TO 5011703.
0	JRAD-01803	09/97	MOD	CWT	CWT	-	REL	INITIAL ISSUE.

FORM NO WDF-5SIDEDMH

5SIDEDMH.WDF

/ /

ISSUED FOR CONSTRUCTION.

REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
0	2100005	GWB / GWB	GWB / GWB	BRM / BRM	AWJ / AWJ	11/08/22

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

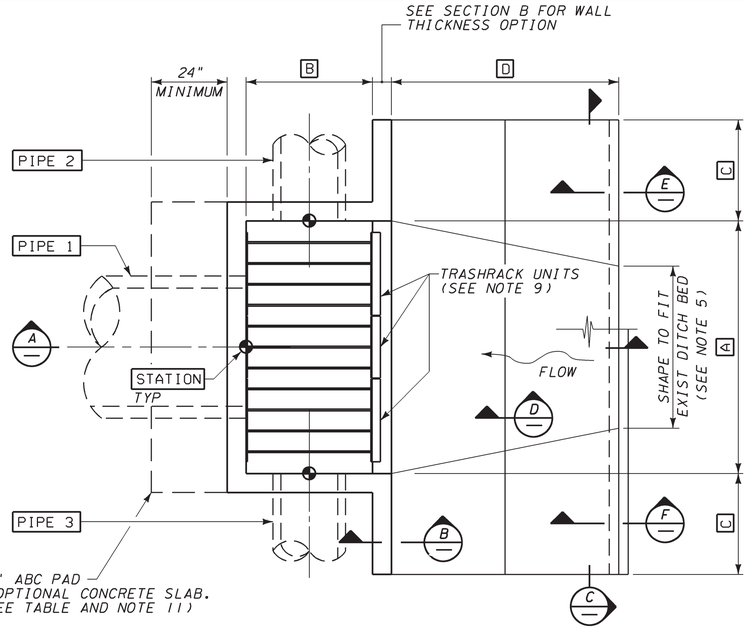
FIVE-SIDED MANHOLE PLANS, SECTIONS AND DETAILS

SCALE: NONE			A910C519.DGN	SHEET NO.
SUBJ CODE	DIST CODE	DWG SIZE	A-910-C519	6
MH	Y3	22X34		

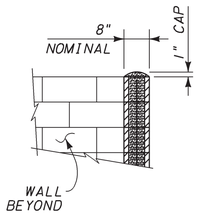
CONSTRUCTION DATA FOR HEADWALL WITH TRASHRACK

TABLE 1
SEE WES-CHKBOGDE

HDWL No.	STATION	PLAN/PROFILE REF DWG	PIPE 1 TYPE	PIPE 1 EL. 1	PIPE 2 TYPE	PIPE 2 EL. 1	PIPE 3 TYPE	PIPE 3 EL. 1	EL. 2	EL. 3	EL. 4	A	B	C	D	E	F	ABC PAD	CONC SLAB	DRAIN REQ'D LEFT	DRAIN REQ'D RIGHT	CHECKBOARD REQUIRED	DIM 1A & 1B
1	32+06.0	A-104-0654	36"RGRCP	1215.8	--------	------	--------	------	1224.3	1219.5	1222.3	72"	56"	32"	336"	114 3/8"	68 5/8"	-	X	-	-	-	---

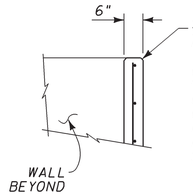


PLAN VIEW



BLOCK WALL TO HAVE ONE #4 REINFORCING BAR CENTERED IN EACH CORE FOR FULL HEIGHT AND CORES FILLED WITH CONCRETE OR SAND/CEMENT GROUT (3:1 RATIO). ALL BLOCKS TO BE LAID IN STAGGERED COURSES (COMMON BOND) WITH OR WITHOUT MORTAR JOINTS, PLASTERED ON EXPOSED SURFACES AND INCLUDING A 1" CAP ON TOP OF WALLS.

BLOCK WALL OPTION

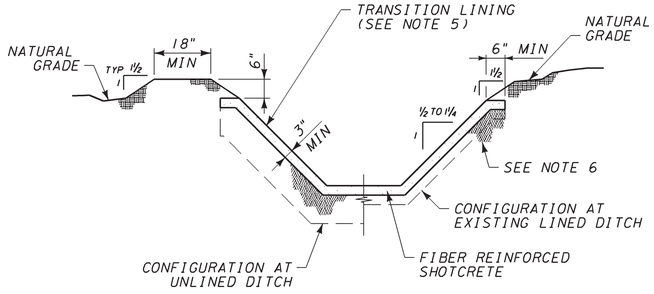


3/4" CHAMFER EXPOSED HORIZONTAL AND VERTICAL EDGES.

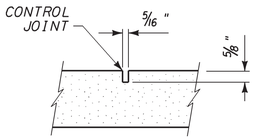
CAST-IN-PLACE WALL OPTION TO HAVE #4 REBAR @ 12" ON CENTER EACH WAY, CENTERED IN WALL. PROVIDE 18" X 18" CORNER BARS AT ALL CORNERS TO MATCH HORIZONTAL REINFORCING. PROVIDE (2) EXTRA #4 BARS ABOVE, BELOW, AT EACH SIDE OF PIPE AND AT EACH DIAGONAL.

CAST-IN-PLACE WALL OPTION

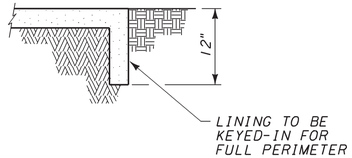
SECTION B



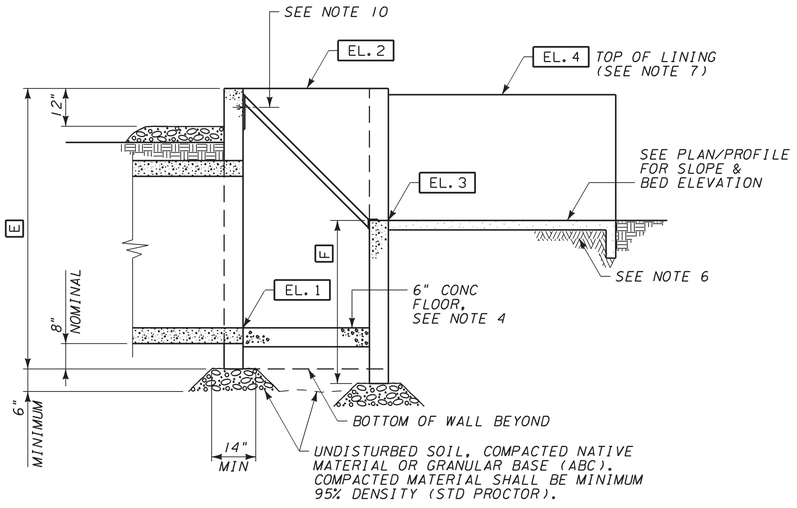
SECTION C



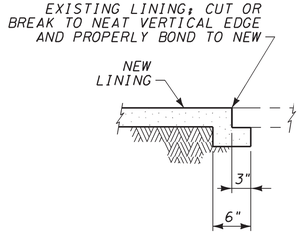
SECTION D
SEE NOTE 8



SECTION E
CONNECTION TO UNLINED DITCH



SECTION A



SECTION F
CONNECTION TO EXISTING LINED DITCH

NOTES

1. SEE PLAN/PROFILE DRAWING(S) FOR ORIENTATION OF HEADWALL(S).
2. UNLESS OTHERWISE NOTED, CONCRETE SHALL BE 3000 PSI (MAG A). SPRAY CONCRETE WITH WHITE CURING COMPOUND.
3. REINFORCING STEEL TO BE ASTM A615 GRADE 60.
4. TOP OF CONCRETE FLOOR TO MATCH THE LOWEST PIPE INVERT (EL. 1).
5. MATCH WIDTH, ELEVATION, AND SLOPE OF EXISTING DITCH, OR AS DIRECTED BY SRP ENGINEERING.
6. SHAPE AND COMPACT TRANSITION LINING SUBGRADE FROM HEADWALL TO 36" PAST UNDISTURBED UNLINED DITCH, OR TO UPSTREAM END OF TRANSITION, WHICHEVER IS GREATER.
7. EXTEND TRANSITION LINING FROM FACE (EL. 4) OF WINGWALLS TO EXISTING DITCH OR CONCRETE LINING BY LENGTH (D), AND MATCH FINISH WITH EXISTING SLIPFORM LINING (IF APPLICABLE).
8. IF TRANSITION LENGTH (D) EXCEEDS 120", TRANSVERSE CONTROL JOINTS ARE REQUIRED AT EQUAL SPACING NOT TO EXCEED 120".
9. TRASHRACKS MAY BE INSTALLED IN ANY SEQUENCE OR ORDER, MAINTAINING THE 6 5/8" SPACING BETWEEN BARS OF ADJACENT UNITS AND EQUAL DISTANCE FROM EACH SIDE OF THE HEADWALL. SEE TRASHRACK REFERENCE DRAWING.
10. INSTALL TRASHRACKS WITH 1/2" DIA. x 3 3/4" EXPANSION ANCHORS, USING THE SLOTTED HOLES AS A TEMPLATE.
11. OPTIONAL CONCRETE SLAB - 4" THICK, MINIMUM 24" WIDE, LENGTH TO MATCH HEADWALL. BROOM FINISH. SLOPE SLAB TO DRAIN AWAY FROM HEADWALL. TOP OF SLAB TO BE LEVEL WITH ADJACENT FINISH GRADE.

CONTRACTOR NOTE

TRASHRACK(S) MUST BE MANUFACTURED PRIOR TO REQUESTING AN IRRIGATION OUTAGE FOR THIS JOB.

REFERENCES

TRASHRACK DETAILS _____ WES-30350-200

REV NO	DATE	DFTR	DSGN	ENGR CHK	SUPV APPD	ISSUE AUTH	
8	01.23.08	JWS	-	CWT	-	REL	ADDED SLAB DRAIN REFERENCE TO DRAWING.
9	08.20.18	JWS	-	-	-	REL	REMOVED XKM CONTACT/QUOTE INFO FROM CONTRACTOR NOTE.

FORM NO WDF-HDWLTRRK

HDWLTRRK.WDF

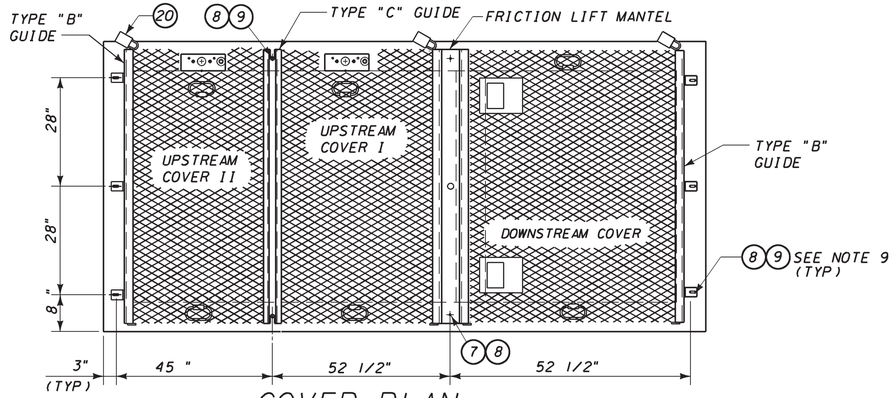
ISSUE FOR CONSTRUCTION

REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
0	2100005	GWB	GWB	BRM	AWJ	11/08/22
		GWB	GWB	BRM	AWJ	

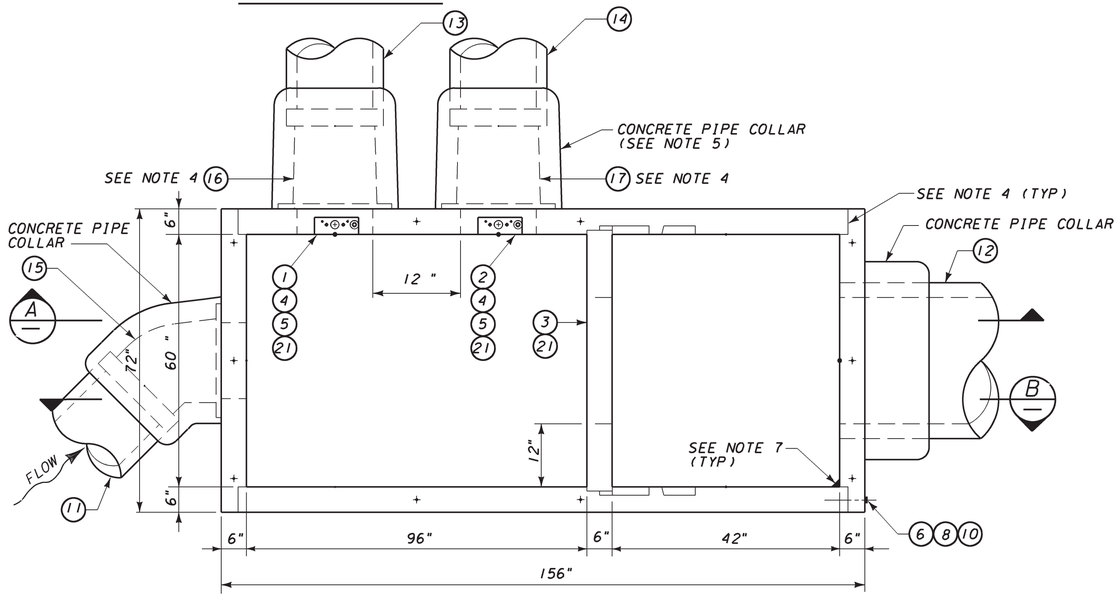
SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

STANDARD HEADWALL WITH TRASHRACK

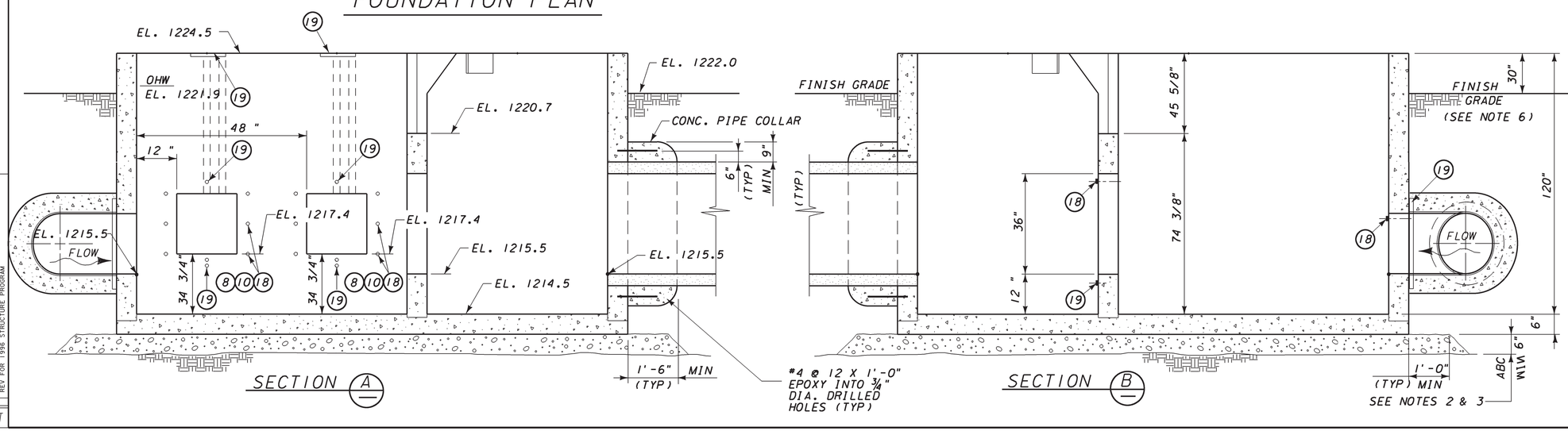
SCALE: NONE			TEMPORARY - 2100005HTI.DGN	SHEET NO.
SUBJ CODE	DIST CODE	DWG SIZE	2100005HTI	7
HDWL	Y3	22X34		



COVER PLAN



FOUNDATION PLAN



BILL OF MATERIAL

ITEM	NO. REQ'D.	DESCRIPTION	LENGTH FT	LENGTH IN	STOCK CODE NO.
1	1	24" TYPE III TURNOUT GATE			5011712
2	1	24" TYPE III TURNOUT GATE			5011712
3	1	36" TYPE II TURNOUT GATE			5011714
4	2	STEM CONNECTOR FOR TYPE III GATE			5011791
5	2	TEE HANDLE ASSEMBLY. SEE DRAWING WES-30350-061 FOR STOCK CODE NUMBER			
6	16	½" DIA. COIL BOLT	0	6"	
7	2	½" DIA. COIL BOLT	0	7	
8	50	½" DIA. FLAT WASHER			5029172
9	8	½" DIA. HEX HEAD, CONC. EXP. BOLT	0	3 ¾	
10	40	½" DIA. SQUARE WASHER			5029180
11	1	36" RGRCP, CLASS III	8	0	
12	1	36 " RGRCP, CLASS III	8	0	
13	2	24 " RGRCP, CLASS V	8	0	
14	2	24 " RGRCP, CLASS V	8	0	
15	1	36" 45° FIBERGLASS TRANSITION			
16	1	24" STRAIGHT FIBERGLASS TRANSITION			
17	1	24" STRAIGHT FIBERGLASS TRANSITION			
18	24	½" DIA. HEX HEAD MACHINE BOLT & NUT	0	8"	
19	13	½" DIA. UNC HEX HEAD BOLTS	0	2	
20	5	WUA LOCK, TYPE "A"			5014607
21	3	MUFFLER CLAMP LOCKING COLLAR			
22	0	STEP RUNGS (SEE NOTE 8)	1	4	5011747

NOTES

1. EXCAVATION FOR THE STRUCTURE SHALL BE IN ACCORDANCE WITH THE SRP "EXCAVATION SAFETY RESOURCE MANUAL".
2. THE MINIMUM REQUIREMENT FOR COMPACTION SHALL BE 95% OF MAXIMUM DENSITY PER ASTM D698 AT +2% TO -4% OF OPTIMUM MOISTURE CONTENT.
3. THE NATIVE MATERIAL BELOW THE ABC PAD SHALL BE COMPACTED AS INDICATED IN NOTE 2.
4. APPLY EPOXY ADHESIVE TO EACH PANEL JOINT AND FIBERGLASS TRANSITION IMMEDIATELY BEFORE ASSEMBLY. THE MINIMUM BEAD OF ADHESIVE SHALL BE 1" WIDE X ½" DEEP AT THE CENTER OF THE JOINT FLANGE.
5. INSTALL CONCRETE PIPE COLLARS FOR EACH FIBERGLASS TRANSITION LOCATION, COVERING THE TRANSITION AND JOINT AT THE PRECAST CONCRETE PIPE.
6. BACKFILL AND COMPACT THE AREA AROUND THE STRUCTURE USING ABC MATERIAL TO A MINIMUM ELEVATION OF 6" ABOVE THE HIGHEST STUBOUT PIPE. THE REMAINING AREA SHALL BE BACK-FILLED AND COMPACTED USING 3" MAXIMUM DIMENSION NATIVE MATERIAL TO THE PLAN FINISH GRADE ELEVATION. ABC AND NATIVE MATERIAL SHALL BE COMPACTED AS INDICATED IN NOTE 2. AGGREGATE SLURRY BACKFILL CAN BE USED IN LIEU OF ABC OR NATIVE MATERIAL BACKFILL.
7. SEAL ALL INSIDE CORNERS WATERTIGHT WITH NON-SHRINK GROUT USING A 1" MINIMUM FILLET.
8. STEP RUNGS, WHEN SPECIFIED IN THE BILL OF MATERIAL SHALL BE PROVIDED AS SHOWN ON DWG. C-23-30 AND INSTALLED AS SPECIFIED ON DWG. C-23-31.
9. INSTALL THE ½" DIA. X 3 ¾" EXPANSION ANCHORS USING THE COVER GUIDES AS A TEMPLATE. EMBEDMENT OF THE ANCHORS SHALL BE TO THE FULL LENGTH OF THE ANCHOR.

REFERENCE DRAWINGS

PLAN/PROFILE ___ A-104-0655 STA STA17+39.0 SH# 3

T.O. STR SLIDE COVERS GUIDES & HARDWARE ___ TEMPORARY SH# 9

CASTING DETAILS ___ TEMPORARY SH# 10
TEMPORARY SH# 11
TEMPORARY SH# 12
TEMPORARY SH# 13
TEMPORARY SH# 14

ISSUE FOR CONSTRUCTION

REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
0	2100005	GWB GWB	GWB GWB	BRM BRM	AWJ AWJ	11/08/22

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4

SEC.15 T 2S R 5E

16/16 COR, COORD, 27.5E-8.67S

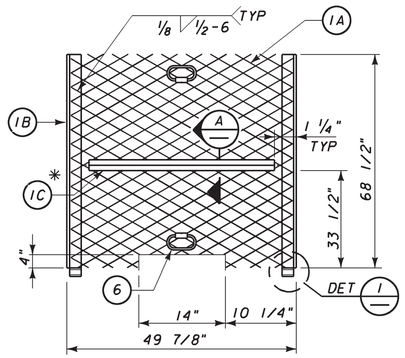
PLTO INSTALLATION DETAILS

REV NO	JOB/LOG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH
2	RAE-00018	04/00	SWT		SWT		
1	RAD-867	12-96	MOD	SWT			

REVISED COVERS
REV FOR 1996 STRUCTURE PROGRAM

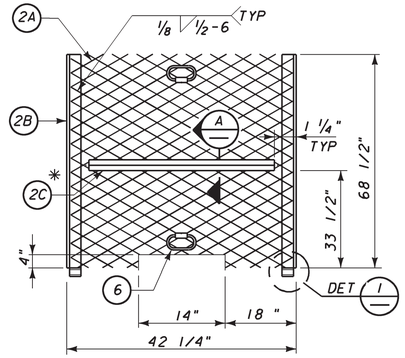
FORM NO DGN-NST02LUT

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SUBJ CODE	DIST CODE	DWG SIZE	B-425-0410	8
PT	Y3	22X34		



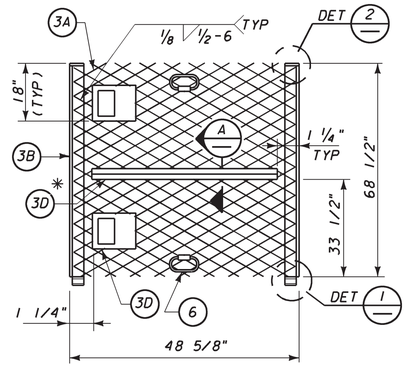
UPSTREAM COVER TYPE II (1)

* NOTE: USE SUPPORT ANGLE ON COVER ≥ 4'-0" IN WIDTH. COVER < 4'-0" DOES NOT REQUIRE A SUPPORT.



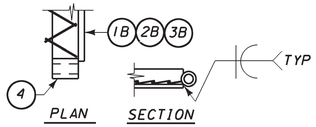
UPSTREAM COVER TYPE II (2)

* NOTE: USE SUPPORT ANGLE ON COVER ≥ 4'-0" IN WIDTH. COVER < 4'-0" DOES NOT REQUIRE A SUPPORT.

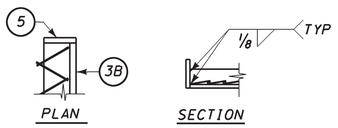


DOWNSTREAM COVER TYPE III (3)

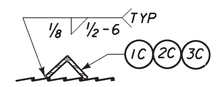
* NOTE: USE SUPPORT ANGLE ON COVER ≥ 4'-0" IN WIDTH. COVER < 4'-0" DOES NOT REQUIRE A SUPPORT.



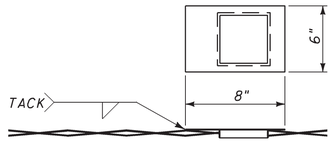
DETAIL (1)



DETAIL (2)



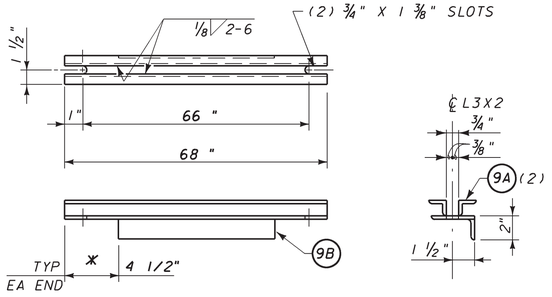
SECTION (A)



WEIR STICK GUARD (3D)

BILL OF MATERIAL

ITEM	NO. REQD	DESCRIPTION	WIDTH INCHES	LENGTH INCHES	STOCK CODE NO.
(1)	1	UPSTREAM COVER TYPE II	——	——	
(1A)	1	1 1/2 X 6 EXPANDED METAL GRATING	49 5/8"	68 1/2"	
(1B)	2	L 3/4 x 3/4 x 1/8 (1 ASS'Y. AS SHOWN, 1 OPP.)		68 1/2"	
(1C)	*	L 1 1/2 x 1 1/2 x 1/4		47 3/8"	
(2)	1	UPSTREAM COVER TYPE II	——	——	
(2A)	1	1 1/2 X 6 EXPANDED METAL GRATING	42 "	68 1/2"	
(2B)	2	L 3/4 x 3/4 x 1/8 (1 ASS'Y. AS SHOWN, 1 OPP.)		68 1/2"	
(2C)	*	L 1 1/2 x 1 1/2 x 1/4		39 3/4"	
(3)	1	DOWNSTREAM COVER TYPE III	——	——	
(3A)	1	1 1/2 X 6 EXPANDED METAL GRATING	48 3/8"	68 1/2"	
(3B)	2	L 3/4 x 3/4 x 1/8 (1 ASS'Y. AS SHOWN, 1 OPP.)		68 1/2	
(3C)	*	L 1 1/2 x 1 1/2 x 1/4		46 1/8"	
(3D)	2	WEIR STICK GUARD (SEE DWG. WES-WEIRGARD)			
(4)	6	1/4" DIA. PIPE, STD. WT.		0 5/8	
(5)	2	BAR 3/4 X 3/16		1 1/4	
(6)	6	HANDLE			5011723
(7)	1	FRICTION LIFT MANTEL		68 "	5011737
(8)	2	TYPE "B" GUIDE		68 "	5011720
(9)	1	TYPE "C" GUIDE			
(9A)	2	L 1 1/4 x 1 1/4 x 1/8		68 "	
(9B)	1	L 3 X 2 X 1/4		68 "	
(10)	1	STEM FOR TYPE III GATE (GATE 1)		92"	5011802
(11)	1	STEM FOR TYPE III GATE (GATE 2)		92"	5011802
(12)	1	TYPE II FRICTION LIFT STEM		83"	5011795
(13)	1	STEM DOG			5011803
(14)	1	LIFTING LUG (& MACHINE BOLT & NUT FOR STEM DOG)			5011730



TYPE "C" GUIDE (9)

* CUT BACK VERTICAL LEG

REFERENCE DRAWINGS:

PLAN PROFILE _____ A-104-0655 STA 17+39.0 SH# 3
STRUCTURE DRAWING _____ B-425-0410 SH# 8

NOTES:

1. UNLESS OTHERWISE SPECIFIED, TOLERANCE DIMENSIONS SHALL BE ± 1/32".
2. ALL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED.
3. COVER DIMENSIONS SHOWN PROVIDE FOR 1/2" TOTAL CLEARANCE IN GUIDES.
4. SANDBLAST TO NEAR WHITE AND ZINC METAL SPRAY OR HOT DIP GALVANIZE 5-7 MILS AFTER FABRICATION.

ISSUE FOR CONSTRUCTION						
0	2100005	GWB / GWB	GWB / GWB	BRM / BRM	AWJ / AWJ	11/08/22
REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE

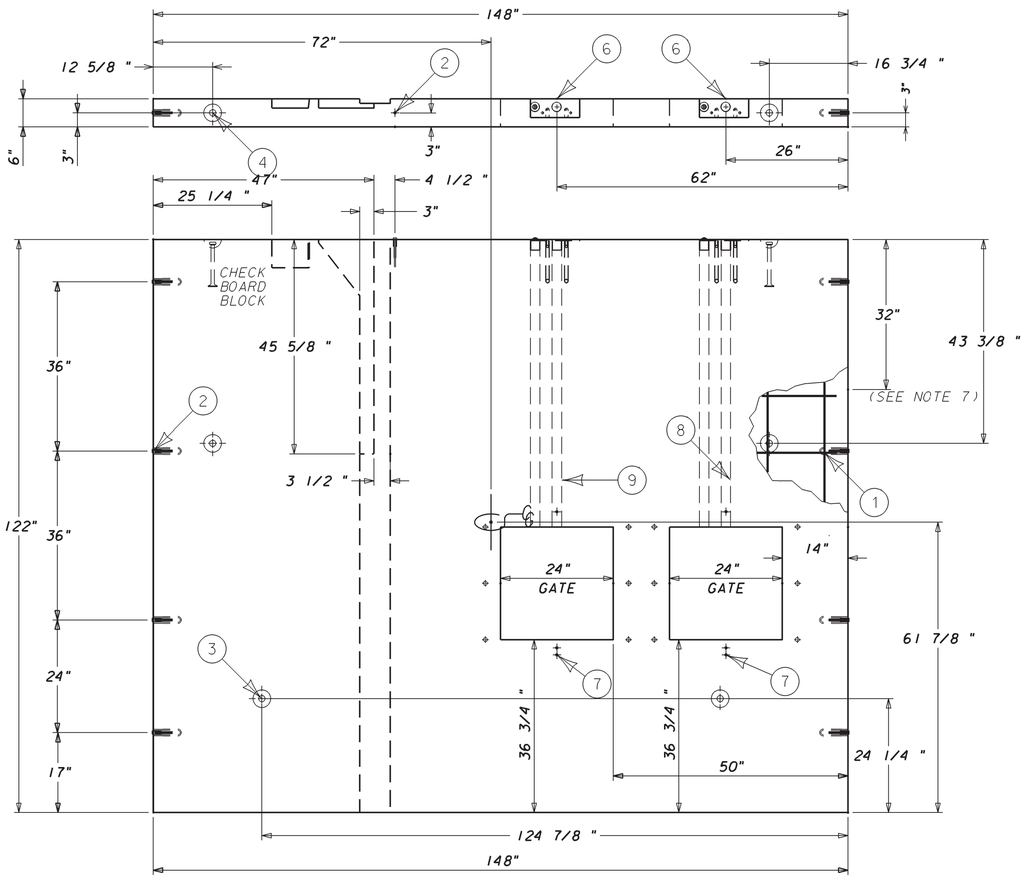
SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4
SEC. 15 T-2S R-5E
16/16 COR, COORD, 27.5E-8.67S
PLTO SLIDE COVER DETAILS

SCALE: NONE			B4250410.dgn	SH. NO.
SUBJ CODE	DISTR CODE	DWG SIZE	TEMPORARY	9
CO	Y3	22X34		

REV NO	JOB LOG NO	DATE	DFTR / CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH
0		6-91	AK			

FORM NO



Left Wall (5)

APPROX. PANEL WT.8805.00 LBS.

Bill of Material					
Item	REQD	Description	FT	IN	Cat No.
1	389	(lf) REBAR (SEE NOTE #3)			
2	9	(eq) 1/2" DIA. COIL LOOP ANCHOR	0	6	5011773
3	4	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR	0	4 3/4	
4	2	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR WITH P-59 SHEAR BAR	0	9 1/2	
5	2.4	(cy) CONCRETE MIX #(SEE NOTE 4)			
6	2	(eq) HANDWHEEL ADAPTER FOR TYPE III TURNOUT GATES	X	X	5011850
7	6	(eq) 1/2" DIA. UNC CONCRETE ANCHOR	0	3	5011772
8	11	(lf) 2" SCHEDULE 40 PVC (RIGID)	_	_	5002880
9	11	(lf) 2" SCHEDULE 40 PVC (RIGID)	_	_	5002880

28 DAY MINIMUM CURE TIME
REQUIRED PRIOR TO USE
OF TOP PICKS ON THIS PANEL

NOTES:

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. REINFORCEMENT ORIENTATION HEREINAFTER REFERRED TO SHALL BE RELATIVE THE THE ERECTED PANELS POSITION.
3. HORIZONTAL REINFORCEMENT IN WALLS SHALL. BE #4 AT 12" ON CENTER. VERTICAL REINFORCEMENT IN WALLS SHALL BE #4 AT 12" ON CENTER. REINFORCEMENT IN FLOOR SHALL BE #4 AT 12" ON CENTER BOTH WAYS. ALL REINFORCEMENT SHALL BE CENTERED IN PANEL. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AT BLOCKOUTS.
4. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH (fc') OF 5000 PSI.
5. TOLERANCE FOR P-52 ANCHOR PLACEMENT SHALL BE WITHIN 1 INCH OF DIMENSIONS SHOWN (SYMMETRY ABOUT VERTICAL CENTER GRAVITY SHALL BE MAINTAINED).
6. PANELS SHALL BE PRECAST WITH INSIDE FACE DOWN FOR WALLS AND TOP FACE DOWN FOR FLOOR. EXPOSED FACE SHALL RECEIVE BROOM FINISH. DATE OF POUR AND PANEL WEIGHT SHALL BE IMPRINTED ON PANEL USING LETTERS 6 INCH MINIMUM HEIGHT.
7. A DECORATIVE STAMPED CONCRETE FINISH SHALL BE APPLIED TO THE OUTSIDE FACE OF THE PANELS FROM THE TOP OF THE WALL DOWN TO THE DIMENSION SHOWN.
8. PROVIDE A 4 INCH X 12 INCH SMOOTH FINISH GATE INDENTIFICATION SPACE FOR EACH DELIVERY GATE AT THE LOCATIONS SHOWN.
9. PIPE VOID DIMENSIONS SHOWN ARE ACTUAL SIZE. FIBERGLASS RINGS ARE AVAILABLE FOR THE PIPE UP TO 66" ID.(VOID SIZE 73 1/4"). SEE WES-CASTSTDS FOR AVAILABLE VOID AND RING SIZES.
10. GATE VOID BLOCKOUT SHALL BE AS SPECIFIED IN THE DETAILS SHOWN ON DRAWING WES-CASTSTDS.

STANDARD SPECIFICATIONS:
REINFORCING STEEL _____ SRP 03210
CONCRETE AND NON-STRUCTURAL GROUT ____ SRP 03300
DETAILS AND ASSEMBLY FORMS:
B-54-157.1, B-54-157.2, B-54-157.3, B-54-157.4

REFERENCE DRAWINGS:
PLAN/PROFILE: A-104-0655 STA: 17+39.0
PRECAST TURNOUT STRUCTURE: B-425-0410
STD SUPPLEMENTAL CASTING DETAIL: WES-CASTSTDS

						/ /

ISSUE FOR CONSTRUCTION

0	2100005	GWB	GWB	BRM	AWJ	11/08/22
		GWB	GWB	BRM	AWJ	
REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE

SALT RIVER PROJECT
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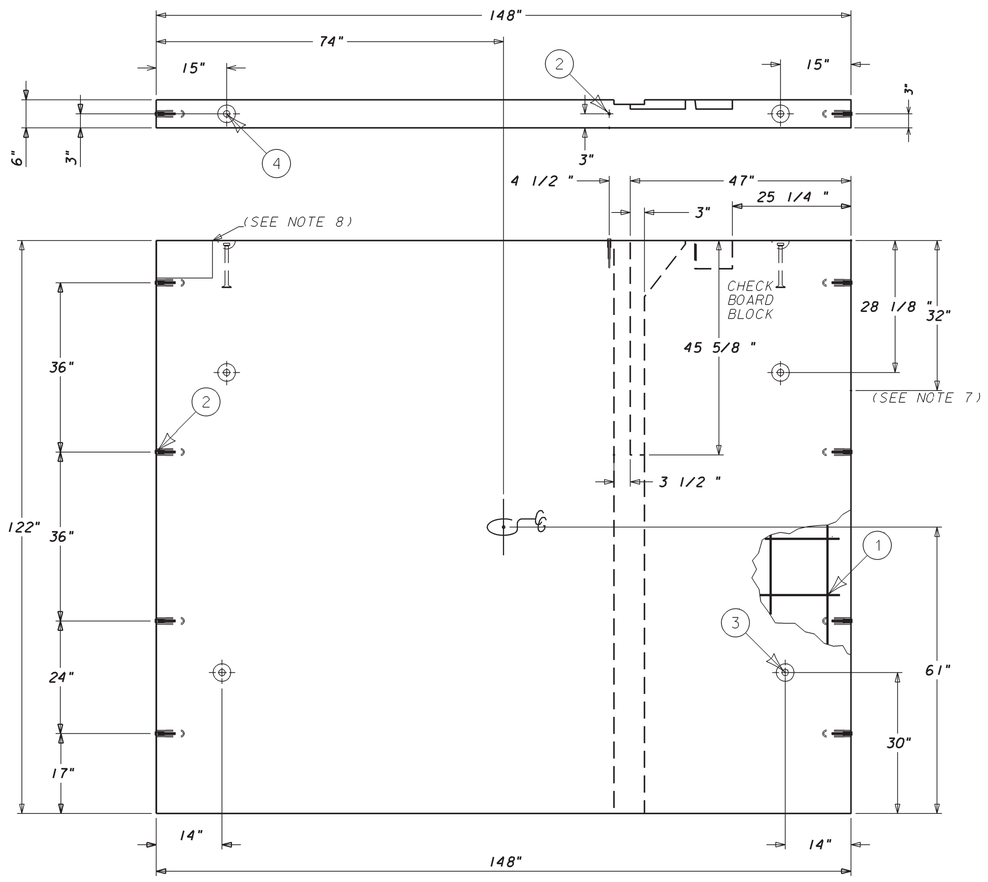
CONSOLIDATED CANAL LATERAL 16.4
SEC.15 T 2S R 5E
16/16 COR, COORD, 27.5E-8.67S
PLTO CASTING DETAIL

SCALE: 3/4" = 1'-0"			P02:B425041O.DGN	SHEET NO
SUBJ CODE	DIST CODE	DWG SIZE	TEMPORARY	10
CD	Y-3	22X34		

REV NO	JOB/JOC NO	DATE	DFTR	CHKR	ENGR COR	SUPV APPD	ISSUE INITS
3	1RAD-01803	09/24/97	WDD	SMT			
REV. NOTE 9, ELIM REF., DWG. NO., CORRECTED SPELLING							
4	1RAD-01803	12/16/98	WDD	SMT			
REVISED/ELIMINATED OUTDATED REFERENCE DRAWINGS							

FORM NO
DGN-BORDER

P02:C120,1211 BORDER.DGN



Right Wall (5)

APPROX. PANEL WT.9405.00 LBS.

Bill of Material					
Item	REQD	Description	FT	IN	Cat No.
(1)	301	(lf) REBAR (SEE NOTE #3)			
(2)	9	(eq) 1/2" DIA. COIL LOOP ANCHOR	0	6	5011773
(3)	4	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR	0	4 3/4	
(4)	2	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR WITH P-59 SHEAR BAR	0	9 1/2	
(5)	2.6	(cy) CONCRETE MIX #(SEE NOTE 4)			

21 DAY MINIMUM CURE TIME
REQUIRED PRIOR TO USE
OF TOP PICKS ON THIS PANEL

NOTES:

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. REINFORCEMENT ORIENTATION HEREINAFTER REFERRED TO SHALL BE RELATIVE THE THE ERECTED PANELS POSITION.
3. HORIZONTAL REINFORCEMENT IN WALLS SHALL. BE #4 AT 12" ON CENTER. VERTICAL REINFORCEMENT IN WALLS SHALL BE #4 AT 12" ON CENTER. REINFORCEMENT IN FLOOR SHALL BE #4 AT 12" ON CENTER BOTH WAYS. ALL REINFORCEMENT SHALL BE CENTERED IN PANEL. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AT BLOCKOUTS.
4. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH (fc') OF 5000 PSI.
5. TOLERANCE FOR P-52 ANCHOR PLACEMENT SHALL BE WITHIN 1 INCH OF DIMENSIONS SHOWN (SYMMETRY ABOUT VERTICAL CENTER GRAVITY SHALL BE MAINTAINED).
6. PANELS SHALL BE PRECAST WITH INSIDE FACE DOWN FOR WALLS AND TOP FACE DOWN FOR FLOOR. EXPOSED FACE SHALL RECEIVE BROOM FINISH. DATE OF POUR AND PANEL WEIGHT SHALL BE IMPRINTED ON PANEL USING LETTERS 6 INCH MINIMUM HEIGHT.
7. A DECORATIVE STAMPED CONCRETE FINISH SHALL BE APPLIED TO THE OUTSIDE FACE OF THE PANELS FROM THE TOP OF THE WALL DOWN TO THE DIMENSION SHOWN.
8. PROVIDE A 4 INCH X 12 INCH SMOOTH FINISH GATE INDENTIFICATION SPACE FOR EACH DELIVERY GATE AT THE LOCATIONS SHOWN.
9. PIPE VOID DIMENSIONS SHOWN ARE ACTUAL SIZE. FIBERGLASS RINGS ARE AVAILABLE FOR THE PIPE UP TO 66" ID.(VOID SIZE 73 1/4"). SEE WES-CASTSTDS FOR AVAILABLE VOID AND RING SIZES.
10. GATE VOID BLOCKOUT SHALL BE AS SPECIFIED IN THE DETAILS SHOWN ON DRAWING WES-CASTSTDS.

STANDARD SPECIFICATIONS:
REINFORCING STEEL _____ SRP 03210
CONCRETE AND NON-STRUCTURAL GROUT ____ SRP 03300
DETAILS AND ASSEMBLY FORMS:
B-54-157.1, B-54-157.2, B-54-157.3, B-54-157.4

REFERENCE DRAWINGS:
PLAN/PROFILE: A-104-0655 STA: 17+39.0
PRECAST TURNOUT STRUCTURE: B-425-0410
STD SUPPLEMENTAL CASTING DETAIL: WES-CASTSTDS

REV NO.	JOB NO	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
						/ /
0	2100005	GWB GWB	GWB GWB	BRM BRM	AWJ AWJ	11/08/22

ISSUE FOR CONSTRUCTION

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4
SEC.15 T 2S R 5E
16/16 COR, COORD, 27.5E-8.67S
PLTO CASTING DETAIL

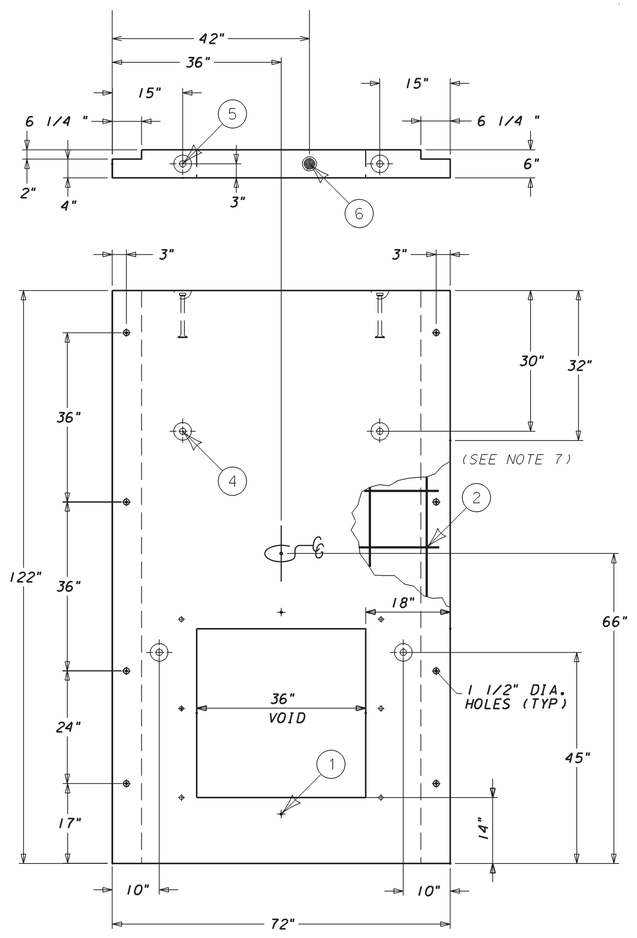
SCALE: 3/4" = 1'-0"	P02:B425041O.DGN			SHEET NO
SUBJ CODE	DIST CODE	DWG SIZE	TEMPORARY	11
CD	Y-3	22X34		

REV NO	JOB/JOC NO	DATE	DFTR	CHKR	ENGR COR	SUPV APPD	ISSUE INITS
3	1RAD-01803	09/24/97	WDD	SWT			
REV. NOTE 9, ELIM REF., DWG. NO., CORRECTED SPELLING							
4	1RAD-01803	12/16/98	WDD	SWT			
REVISED/ELIMINATED OUTDATED REFERENCE DRAWINGS							

FORM NO
DGN-BORDER

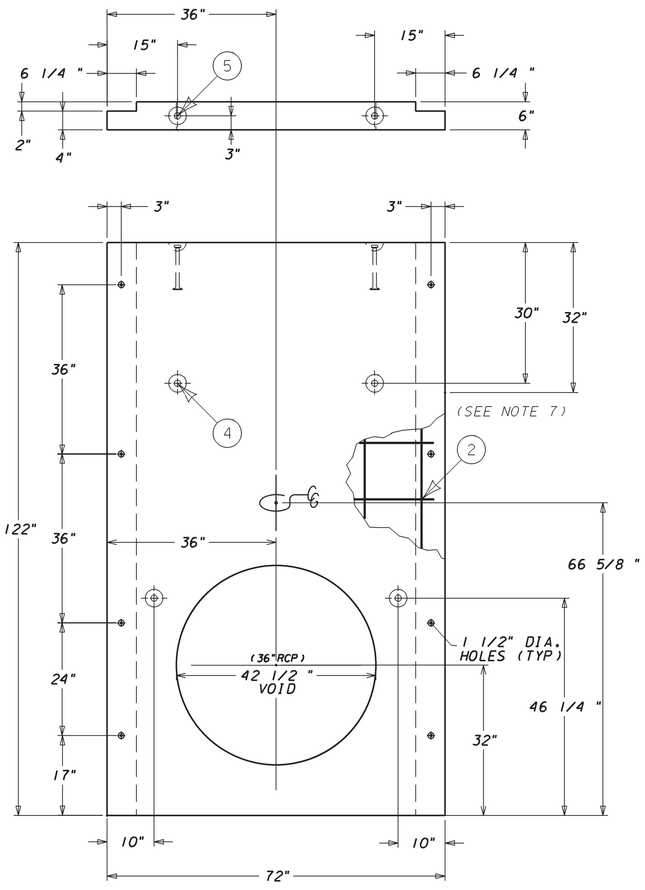
P02:C120,1211 BORDER.DGN

Bill of Material					
Item	REQD	Description	FT	IN	Cat No.
(1)	2	(ea) 1/2" DIA. UNC CONCRETE ANCHOR	0	3	5011772
(2)	339	(lf) REBAR (SEE NOTE #3)			
(3)	2.1	(cy) CONCRETE MIX #(SEE NOTE 4)			
(4)	8	(ea) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR	0	4 3/4	
(5)	4	(ea) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR WITH P-59 SHEAR BAR	0	9 1/2	
(6)	1	(ea) STD WUA BRONZE BENCH MARK	X	X	5014362



Upstream (3)

APPROX. PANEL WT. 3901.00 LBS.



DownStream (3)

APPROX. PANEL WT. 3837.00 LBS.

NOTES:

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. REINFORCEMENT ORIENTATION HEREINAFTER REFERRED TO SHALL BE RELATIVE THE THE ERECTED PANELS POSITION.
3. HORIZONTAL REINFORCEMENT IN WALLS SHALL. BE #4 AT 12" ON CENTER. VERTICAL REINFORCEMENT IN WALLS SHALL BE #4 AT 12" ON CENTER. REINFORCEMENT IN FLOOR SHALL BE #4 AT 12" ON CENTER BOTH WAYS. ALL REINFORCEMENT SHALL BE CENTERED IN PANEL. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AT BLOCKOUTS.
4. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH (fc') OF 5000 PSI.
5. TOLERANCE FOR P-52 ANCHOR PLACEMENT SHALL BE WITHIN 1 INCH OF DIMENSIONS SHOWN (SYMMETRY ABOUT VERTICAL CENTER GRAVITY SHALL BE MAINTAINED).
6. PANELS SHALL BE PRECAST WITH INSIDE FACE DOWN FOR WALLS AND TOP FACE DOWN FOR FLOOR. EXPOSED FACE SHALL RECEIVE BROOM FINISH. DATE OF POUR AND PANEL WEIGHT SHALL BE IMPRINTED ON PANEL USING LETTERS 6 INCH MINIMUM HEIGHT.
7. A DECORATIVE STAMPED CONCRETE FINISH SHALL BE APPLIED TO THE OUTSIDE FACE OF THE PANELS FROM THE TOP OF THE WALL DOWN TO THE DIMENSION SHOWN.
8. PROVIDE A 4 INCH X 12 INCH SMOOTH FINISH GATE INDENTIFICATION SPACE FOR EACH DELIVERY GATE AT THE LOCATIONS SHOWN.
9. PIPE VOID DIMENSIONS SHOWN ARE ACTUAL SIZE. FIBERGLASS RINGS ARE AVAILABLE FOR THE PIPE UP TO 66" ID.(VOID SIZE 73 1/4"). SEE WES-CASTSTDS FOR AVAILABLE VOID AND RING SIZES.
10. GATE VOID BLOCKOUT SHALL BE AS SPECIFIED IN THE DETAILS SHOWN ON DRAWING WES-CASTSTDS.

STANDARD SPECIFICATIONS:
REINFORCING STEEL _____ SRP 03210
CONCRETE AND NON-STRUCTURAL GROUT ____ SRP 03300
DETAILS AND ASSEMBLY FORMS:
B-54-157.1, B-54-157.2, B-54-157.3, B-54-157.4

REFERENCE DRAWINGS:
PLAN/PROFILE: A-104-0655 STA: 17+39.0
PRECAST TURNOUT STRUCTURE: B-425-0410
STD SUPPLEMENTAL CASTING DETAIL: WES-CASTSTDS

						1 / 1

ISSUE FOR CONSTRUCTION

0	2100005	GWB	GWB	BRM	AWJ	11/08/22
		GWB	GWB	BRM	AWJ	
REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4
SEC.15 T 2S R 5E
16/16 COR, COORD, 27.5E-8.67S
PLTO CASTING DETAIL

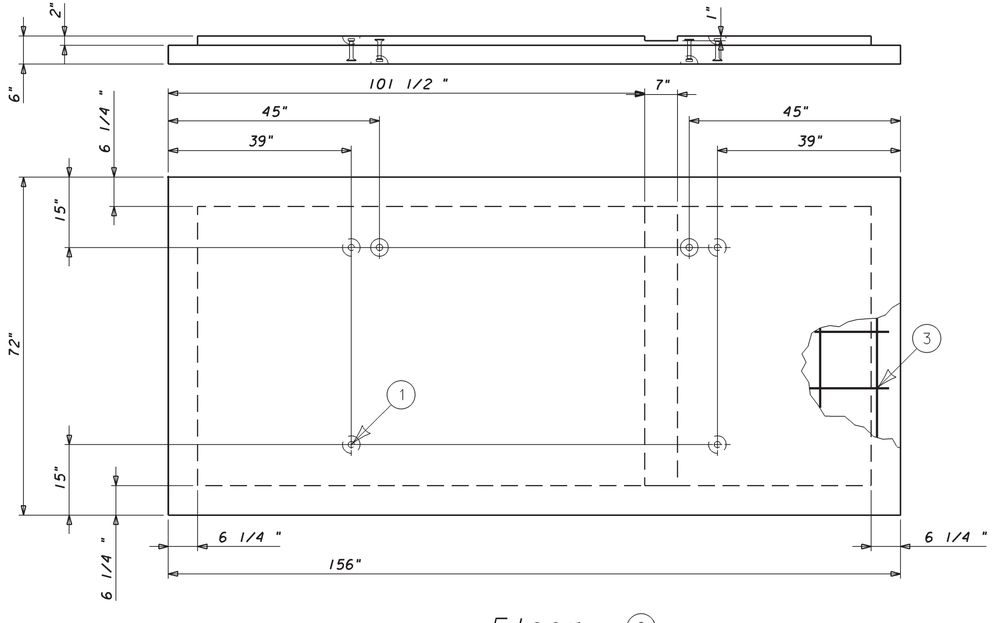
SCALE: 3/4" = 1'-0"			P02:B4250410.DGN	SHEET NO
SUBJ CODE	DIST CODE	DWG SIZE	TEMPORARY	12
CD	Y-3	22X34		

REV NO	JOB/LOG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH	
3	PAD-01805	09/24/97	MJD	SMT				REV. NOTE 9; ELIM REF. DWG. NO.; CORRECTED SPELLING
4	PAD-01805	12/16/98	MJD	SMT				REVISED/ELIMINATED OUTDATED REFERENCE DRAWINGS

FORM NO
DGN-BORDER

P02:[120,121] BORDER.DGN

Bill of Material					
Item	REQD	Description	FT	IN	Cat No.
(1)	6	(eg) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR	0	4 3/4	
(2)	1.6	(cy) CONCRETE MIX #(SEE NOTE 4)			
(3)	178	(lf) REBAR (SEE NOTE #3)			



Floor (2)

APPROX. PANEL WT. 5850.00 LBS.

NOTES:

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. REINFORCEMENT ORIENTATION HEREINAFTER REFERRED TO SHALL BE RELATIVE THE THE ERECTED PANELS POSITION.
3. HORIZONTAL REINFORCEMENT IN WALLS SHALL. BE #4 AT 12" ON CENTER. VERTICAL REINFORCEMENT IN WALLS SHALL BE #4 AT 12" ON CENTER. REINFORCEMENT IN FLOOR SHALL BE #4 AT 12" ON CENTER BOTH WAYS. ALL REINFORCEMENT SHALL BE CENTERED IN PANEL. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AT BLOCKOUTS.
4. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH (fc') OF 5000 PSI.
5. TOLERANCE FOR P-52 ANCHOR PLACEMENT SHALL BE WITHIN 1 INCH OF DIMENSIONS SHOWN (SYMMETRY ABOUT VERTICAL CENTER GRAVITY SHALL BE MAINTAINED).
6. PANELS SHALL BE PRECAST WITH INSIDE FACE DOWN FOR WALLS AND TOP FACE DOWN FOR FLOOR. EXPOSED FACE SHALL RECEIVE BROOM FINISH. DATE OF POUR AND PANEL WEIGHT SHALL BE IMPRINTED ON PANEL USING LETTERS 6 INCH MINIMUM HEIGHT.
7. A DECORATIVE STAMPED CONCRETE FINISH SHALL BE APPLIED TO THE OUTSIDE FACE OF THE PANELS FROM THE TOP OF THE WALL DOWN TO THE DIMENSION SHOWN.
8. PROVIDE A 4 INCH X 12 INCH SMOOTH FINISH GATE INDENTIFICATION SPACE FOR EACH DELIVERY GATE AT THE LOCATIONS SHOWN.
9. PIPE VOID DIMENSIONS SHOWN ARE ACTUAL SIZE. FIBERGLASS RINGS ARE AVAILABLE FOR THE PIPE UP TO 66" ID.(VOID SIZE 73 1/4").
   SEE WES-CASTSTDS FOR AVAILABLE VOID AND RING SIZES.
10. GATE VOID BLOCKOUT SHALL BE AS SPECIFIED IN THE DETAILS SHOWN ON DRAWING WES-CASTSTDS.

STANDARD SPECIFICATIONS:
REINFORCING STEEL _____ SRP 03210
CONCRETE AND NON-STRUCTURAL GROUT ____ SRP 03300
DETAILS AND ASSEMBLY FORMS:
B-54-157.1, B-54-157.2, B-54-157.3, B-54-157.4

REFERENCE DRAWINGS:
PLAN/PROFILE: A-104-0655 STA: 17+39.0
PRECAST TURNOUT STRUCTURE: B-425-0410
STD SUPPLEMENTAL CASTING DETAIL: WES-CASTSTDS

REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
						/ /
0	2100005	GWB	GWB	BRM	AWJ	11/08/22
		GWB	GWB	BRM	AWJ	

ISSUE FOR CONSTRUCTION

SALT RIVER PROJECT
WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4
SEC.15 T 2S R 5E
16/16 COR, COORD, 27.5E-8.67S
PLTO CASTING DETAIL

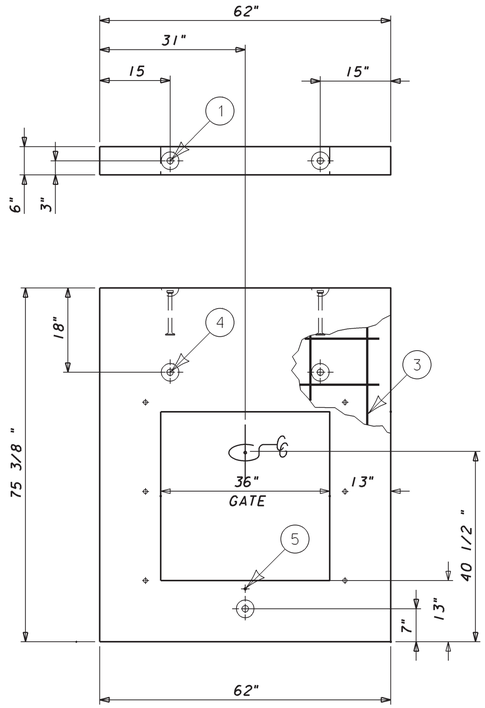
SCALE: 3/4"=1'-0"	P02:B4250410.DGN	SHEET NO
SUBJ CODE / DIST CODE / DWG SIZE	TEMPORARY	13
CD / Y-3 / 22X34		

REV NO	JOB/DG NO	DATE	DFTR	CHKR	ENGR CHK	SUPV ISSUE APPD AUTH
3	B4AD-01803	09/24/97	MDD	SWT		
REV., NOTE 9, ELIM REF. DWG. NO., CORRECTED SPELLING						
4	B4AD-01803	12/16/98	MDD	SWT		
REVISED/ELIMINATED OUTDATED REFERENCE DRAWINGS						

P02:[120,121] BORDER.DGN

FORM NO
DGN-BORDER

Bill of Material					
Item	REQD	Description	FT	IN	Cat No.
(1)	2	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR WITH P-59 SHEAR BAR	0	9 1/2	
(2)	0.5	(cy) CONCRETE MIX #(SEE NOTE 4)			
(3)	124	(lf) REBAR (SEE NOTE #3)			
(4)	3	(eq) 4 TON DAYTON-SUPERIOR P-52 S.L. ANCHOR	0	4 3/4	
(5)	1	(eq) 1/2" DIA. UNC CONCRETE ANCHOR	0	3	5011772



Crest Wall (2)

APPROX. PANEL WT.1760.00 LBS.

NOTES:

1. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. REINFORCEMENT ORIENTATION HEREINAFTER REFERRED TO SHALL BE RELATIVE THE THE ERECTED PANELS POSITION.
3. HORIZONTAL REINFORCEMENT IN WALLS SHALL. BE #4 AT 12" ON CENTER. VERTICAL REINFORCEMENT IN WALLS SHALL BE #4 AT 12" ON CENTER. REINFORCEMENT IN FLOOR SHALL BE #4 AT 12" ON CENTER BOTH WAYS. ALL REINFORCEMENT SHALL BE CENTERED IN PANEL. ADDITIONAL REINFORCEMENT SHALL BE PROVIDED AT BLOCKOUTS.
4. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH (fc') OF 5000 PSI.
5. TOLERANCE FOR P-52 ANCHOR PLACEMENT SHALL BE WITHIN 1 INCH OF DIMENSIONS SHOWN (SYMMETRY ABOUT VERTICAL CENTER GRAVITY SHALL BE MAINTAINED).
6. PANELS SHALL BE PRECAST WITH INSIDE FACE DOWN FOR WALLS AND TOP FACE DOWN FOR FLOOR. EXPOSED FACE SHALL RECEIVE BROOM FINISH. DATE OF POUR AND PANEL WEIGHT SHALL BE IMPRINTED ON PANEL USING LETTERS 6 INCH MINIMUM HEIGHT.
7. A DECORATIVE STAMPED CONCRETE FINISH SHALL BE APPLIED TO THE OUTSIDE FACE OF THE PANELS FROM THE TOP OF THE WALL DOWN TO THE DIMENSION SHOWN.
8. PROVIDE A 4 INCH X 12 INCH SMOOTH FINISH GATE INDENTIFICATION SPACE FOR EACH DELIVERY GATE AT THE LOCATIONS SHOWN.
9. PIPE VOID DIMENSIONS SHOWN ARE ACTUAL SIZE. FIBERGLASS RINGS ARE AVAILABLE FOR THE PIPE UP TO 66" ID.(VOID SIZE 73 1/4"). SEE WES-CASTSTDS FOR AVAILABLE VOID AND RING SIZES.
10. GATE VOID BLOCKOUT SHALL BE AS SPECIFIED IN THE DETAILS SHOWN ON DRAWING WES-CASTSTDS.

STANDARD SPECIFICATIONS:

REINFORCING STEEL _____ SRP 03210

CONCRETE AND NON-STRUCTURAL GROUT ____ SRP 03300

DETAILS AND ASSEMBLY FORMS:

B-54-157.1, B-54-157.2, B-54-157.3, B-54-157.4

REFERENCE DRAWINGS:

PLAN/PROFILE: A-104-0655 STA: 17+39.0

PRECAST TURNOUT STRUCTURE: B-425-0410

STD SUPPLEMENTAL CASTING DETAIL: WES-CASTSTDS

REV NO.	JOB NO.	DFTR	DSGN	ENGR CHK	ISSUE AUTH	DATE
						/ /
0	2100005	GWB GWB	GWB GWB	BRM BRM	AWJ AWJ	11/08/22

ISSUE FOR CONSTRUCTION

SALT RIVER PROJECT

WATER ENGINEERING ◇ PHOENIX, ARIZONA

CONSOLIDATED CANAL LATERAL 16.4

SEC.15 T 2S R 5E

16/16 COR, COORD, 27.5E-8.67S

PLTO CASTING DETAIL

SCALE: 3/4"=1'-0"	P02:B4250410.DGN	SHEET NO
SUBJ CODE: CD	DIST CODE: Y-3	DWG SIZE: 22X34
TEMPORARY		14

REV NO	JOB/JOB NO	DATE	DFTR	CHKR	ENGR CHK	SUPV APPD	ISSUE AUTH
3	#AD-01803	09/24/97	MJD	SMT			
REV. NOTE 9, ELIM REF. DWG. #D-1, CORRECTED SPELLING							
4	#AD-01803	12/16/98	MJD	SMT			
REVISED/ELIMINATED OUTDATED REFERENCE DRAWINGS							

P02:C120,1211 BORDER.DGN

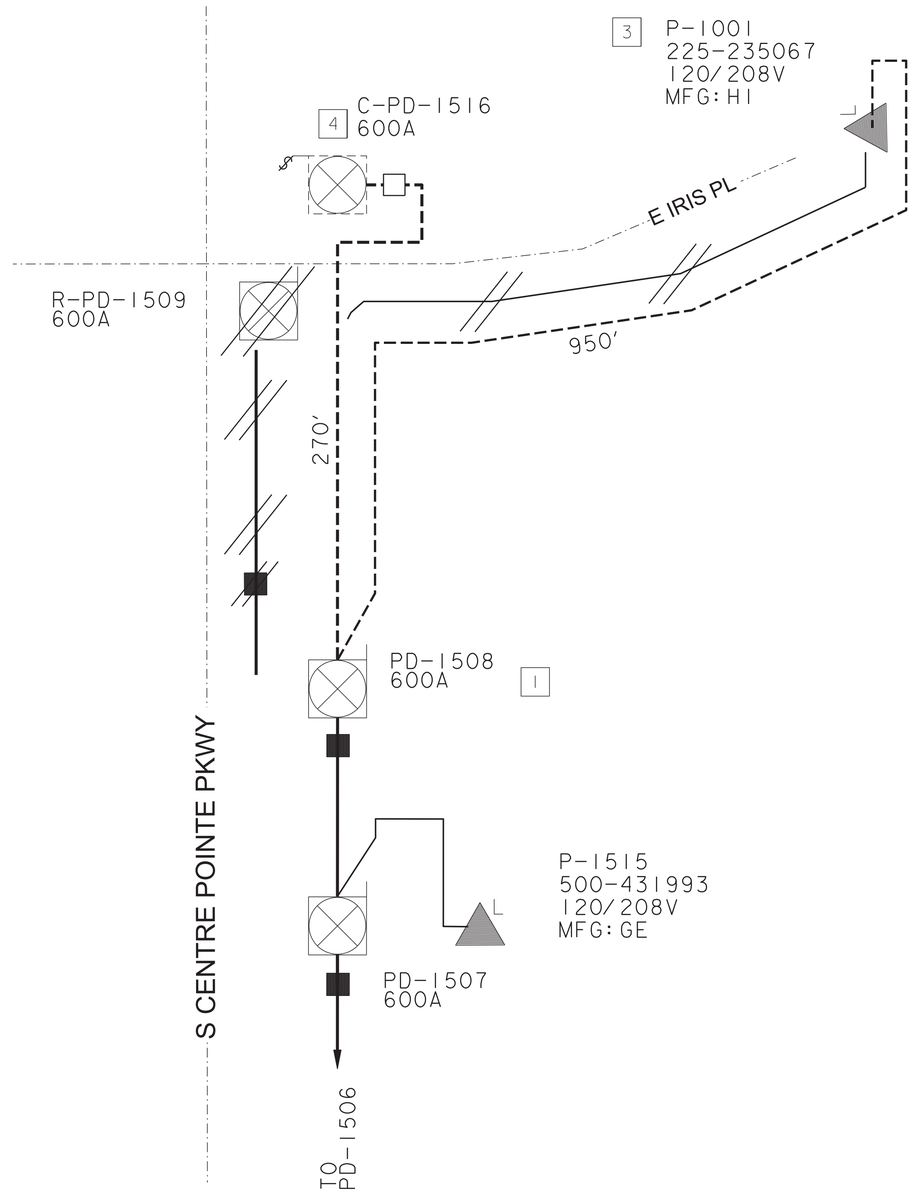
FORM NO

DGN-BORDER

SCHEMATIC

SCHEMATIC LEGEND
(UNLESS OTHERWISE NOTED)

- E-UA2K
- C-UA2K
- C-3UA40K
- C-UA750K
- E-UA750K
- // SLASHES DENOTE REMOVAL



N. T. S.

PROJECT NOTES

SRP ELECTRIC SERVICE SPECIFICATIONS ARE AVAILABLE ON-LINE AT:
HTTP://WWW.SRPNET.COM/ELECTRIC/BUSINESS/SPECS

GRAPHIC SYMBOLS

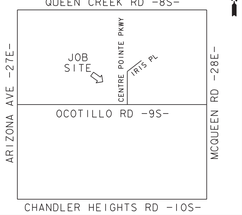
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B/C = BACK OF CURB
E/P = EDGE OF PAVEMENT
L/G = LIP OF GUTTER
R/W = RIGHT OF WAY

- PROPOSED SINGLE-PHASE TRANSFORMER
- PROPOSED THREE-PHASE TRANSFORMER
- PROPOSED FUSING ENCLOSURE
- PROPOSED SWITCHING ENCLOSURE
- PROPOSED 1 PHASE PULLING ENCLOSURE
- PROPOSED 3 PHASE / FEEDER PULLING ENCLOSURE
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- UNDERGROUND STREETLIGHT CONDUCTOR
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- PROPOSED FLUSH-MOUNTED J-BOX
- PROPOSED ABOVE-GROUND J-BOX
- PROPOSED WOOD POLE
- WORK POINT BOX

VICINITY MAP



FIELD INSTALLATION STAMP

SURVEY AND PERMIT INFORMATION

- ☐ SRP SURVEY TO STAKE FOR LOCATION AND TIE FOR EASEMENTS. CUSTOMER CONTROL POINTS REQUIRED: YES ☐ NO ☐
- ☐ CUSTOMER'S SURVEY TO STAKE FOR LOCATION/CONSTRUCTION AND TIE FOR EASEMENTS. CUSTOMER'S SURVEYOR MUST ATTEND PRE-CON MEETING.
- ☐ SRP SURVEY TO STAKE FOR LOCATION, NO EASEMENT REQUIRED.
- ☐ 3RD PARTY EASEMENT REQUIRED.
- ☐ NO SURVEY REQUIRED.
- ☐ PERMIT REQUIRED: CITY OF _____ COUNTY _____
  OTHER _____ PERMIT NO. _____
- ☐ NO PERMIT REQ.

REV	REVISED BY	DATE	REVISION DESCRIPTION
4			
3			
2			
1			
0	JIORTEGA	5-18-22	JOB CREATED

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL SWITCH RELOCATION
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT _____ PHONE _____
BILLING ACCT NO.
FIS JO T3417579 MAP I/4 SE S 15 T 2S R 5E
4O/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO _____ AMP VERSION _____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

Contact Arizona 811 at least two full working days before you begin excavation. Arizona811.com Call 811 or click Arizona811.com

SHEET NUMBER | OF 4

NOTICE

THIS JOB ORDER INVOLVES OVERHEAD, UNDERGROUND AND/ OR SERVICES
OH# _____
UG# T3417580
SER# _____

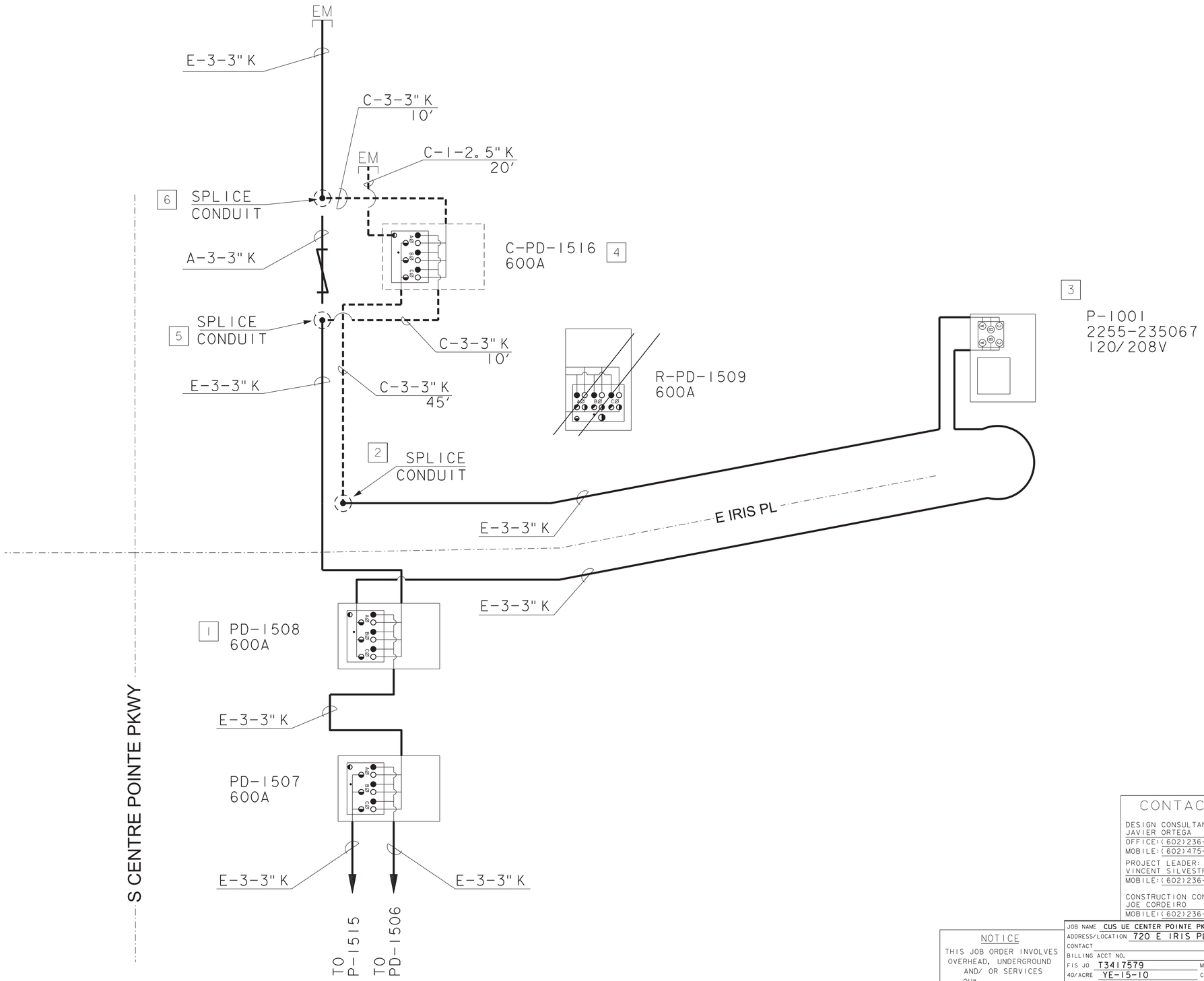
CONTACTS:

DESIGN CONSULTANT:
JAVIER ORTEGA
OFFICE:(602)236-3749
MOBILE:(602)475-8105

PROJECT LEADER:
VINCENT SILVESTRO
MOBILE:(602)236-0432

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)236-1113

CONDUIT ONE-LINE



FIELD INSTALLATION STAMP

CONTACTS:

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NOTICE

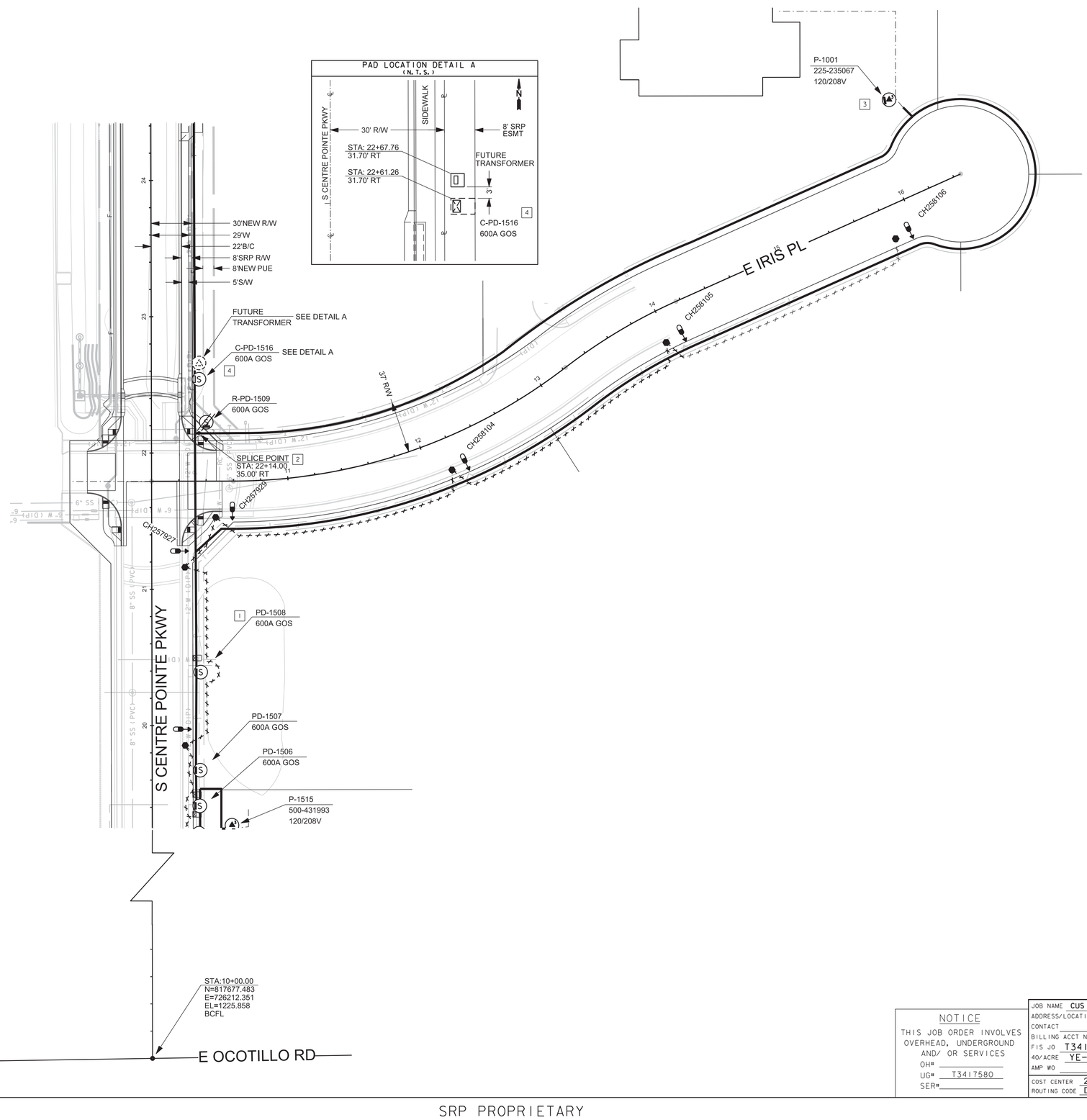
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UG# T3417580
SER#

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ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT PHONE
BILLING ACCT NO.
FIS JO T3417579 MAP 1/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO AMP VERSION
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

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SHEET NUMBER 2 OF 4

MAIN LINE



N

1" = 40'

FIELD INSTALLATION STAMP

CONTACTS:

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UG# T3417580
SER# _____

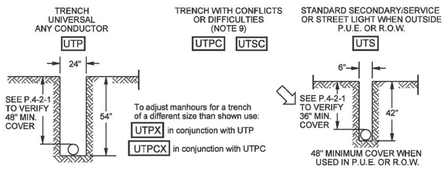
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BILLING ACCT NO. _____
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Arizona811
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SRP®

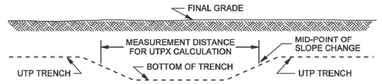
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

SHEET NUMBER 3 OF 4



NOTES:

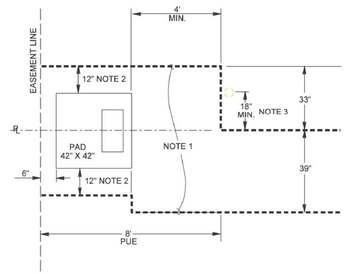
1. Trench depths and conduit cover are to be measured from final grade stakes. All trench depths or conduit cover requirements specified on a job drawing shall be followed.
2. These trench codes provide man-hours for excavation only and do not provide for trench backfill.
3. The total trench footage length will be shown in the grid as standard trench, either UTP for primary or UTS for secondary, street light, or service. When trench is provided by customer, this is the only coding required on the job grid.
4. Non standard trench locations will be identified on the job order sketch with required width and depth dimensions given.
5. When trenching is provided by SRP, non standard trenches shall have 2 compatible unit codes in the grid, UTP plus the UTPX, to adjust the time for digging.
6. When specified depth cannot be obtained because of solid rock, a minimum earth cover of 24" is acceptable, provided a minimum 2" encasement of concrete surrounds the conduit.
7. Use example shown to figure length of UTPX trench, unless the entire trench is non standard.



UTPX quantity = the factor from the UT-X Chart multiplied by the trench footage length which is non-standard, as calculated in item 4. If multiple calculations for non-standard trench are made, add all totals together, only one entry is needed for UTPX quantity in the grid.

8. If secondary/service or street light must be placed in P.U.E. or road R.O.W.,use UTP trench dimensions and enter UTS as the compatible unit.
9. Provides 1.5 times regular man-hours.
10. Trench bottom to be smooth and free of sharp rocks. Where excavation is in rock, bottom of trench to have protective layer of clean, level, tamped backfill or sand.

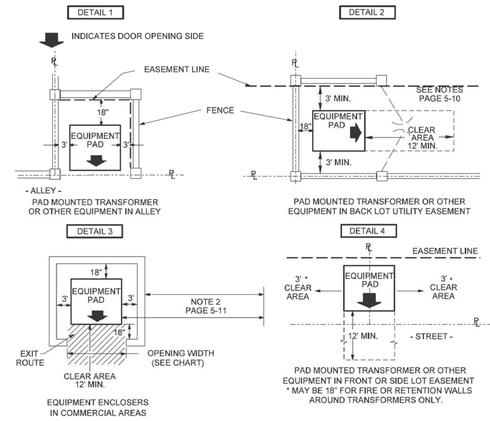
Underground Distribution Construction Standards	REV. CORRECTED TRENCH DEPTH TYPO.	Page 1 of 2
PROPRIETARY MATERIAL	TRENCHING EXCAVATION CODES	ISSUE DATE: 01/15/87 REV. DATE: 03/06/13 APPROVAL: B.PRIEST
	6-11-1	8513E135.DGN



NOTES

1. No Telco or CATV pedestals, water boxes, poles, permanent obstructions or tripping hazarcs between lines. Clear area is from PUE (house side) to street, or 12' maximum in front of pad.
2. This 12" minimum dimension describes the space requirement between the SRP pad and the Telco or CATV pedestal. When stubbing up Telco or CATV conduit, allow additional space to ensure the Telco or CATV pedestal does not enter the 12" minimum space.
3. If a light pole or other utility is required in this area, it is preferred that it be installed a minimum of 18" from the property line.
4. Bonding shall be provided between all above ground metallic power and communications apparatus (pedestals, terminals, apparatus cases, transformer cases, metal poles, etc.) that are separated by a distance of 6' or less.

Electric Service Specifications		
PROPRIETARY MATERIAL	CLEARANCES CLEAR AREA FOR CUSTOMER EQUIPMENT ADJACENT TO TRANSFORMER	ISSUE DATE: 03/08/89 REV. DATE: 02/23/17 APPROVAL: N.SABBAH
	5-14	8509E48.DGN



NOTES

The distances shown around equipment pads shall be totally unobstructed. These distances also apply to poles & structures in overhead areas.
EXCEPTION: No pole or structure shall be totally enclosed by a wall or fence with an access gate (upper right diagram not allowed in overhead areas).

TYPE OF EQUIPMENT	MINIMUM OPENING WIDTH
All Except 3Ø Transformers Below	6 1/2'
150 - 500 kVA Transformers	10'
750 - 1,000 kVA Transformers	12'
1,500 - 2,500 kVA Transformers	12'

Electric Service Specifications		Page 1 of 3
PROPRIETARY MATERIAL	CLEARANCES CUSTOMER FENCING, EQUIPMENT OR OBSTRUCTIONS ADJACENT TO SRP EQUIPMENT INSTALLATIONS	ISSUE DATE: 04/15/86 REV. DATE: 06/06/17 APPROVAL: N.SABBAH
	5-11	8509E45.DGN

N. T. S.

FIELD INSTALLATION STAMP

CONTACTS:

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CONSTRUCTION CONSULTANT:
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MOBILE:(602)236-1113

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL SWITCH RELOCATION
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
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BILLING ACCT NO.
FIS JO T3417579 MAP 1/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO AMP VERSION

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Arizona811
Call 811 or dial Arizona811.com

COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

SHEET NUMBER 4 OF 4

SCHEMATIC

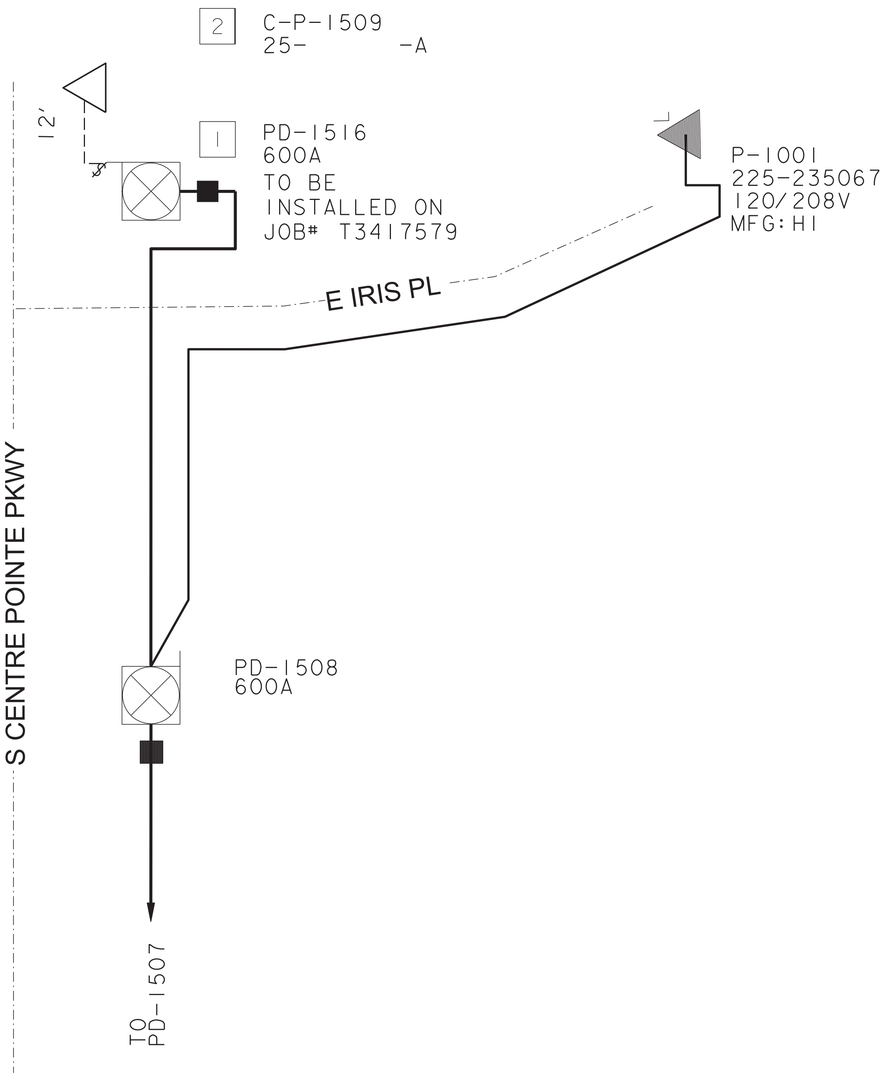
SCHEMATIC LEGEND

(UNLESS OTHERWISE NOTED)

- E-UA2K
- C-UA2K
- C-3UA40K
- C-UA750K
- E-UA750K
- // SLASHES DENOTE REMOVAL

N

N. T. S.



SCHEMATIC

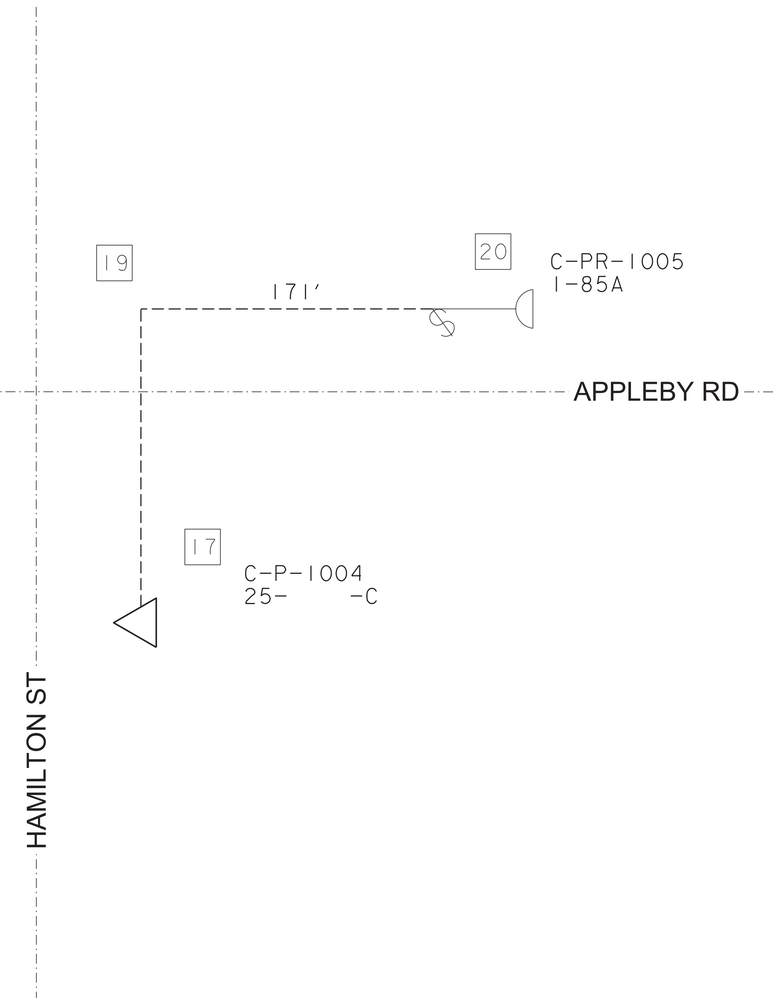
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N

N. T. S.



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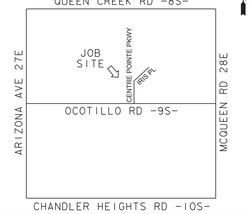
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- PROPOSED THREE-PHASE TRANSFORMER
- PROPOSED FUSING ENCLOSURE
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- UNDERGROUND STREETLIGHT CONDUCTOR
- UNDERGROUND SERVICE CONDUCTOR
- UNDERGROUND SECONDARY CONDUCTOR
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- PROPOSED WOOD POLE
- WORK POINT BOX

VICINITY MAP



FIELD INSTALLATION STAMP

SURVEY AND PERMIT INFORMATION

- ☐ SRP SURVEY TO STAKE FOR LOCATION AND TIE FOR EASEMENTS. CUSTOMER CONTROL POINTS REQUIRED: YES☐ NO☐
- ☐ CUSTOMER'S SURVEY TO STAKE FOR LOCATION/CONSTRUCTION AND TIE FOR EASEMENTS. CUSTOMER'S SURVEYOR MUST ATTEND PRE-CON MEETING.
- ☐ SRP SURVEY TO STAKE FOR LOCATION, NO EASEMENT REQUIRED.
- ☐ 3RD PARTY EASEMENT REQUIRED.
- ☐ NO SURVEY REQUIRED.
- ☐ PERMIT REQUIRED: CITY OF _____ COUNTY _____
  OTHER _____ PERMIT NO. _____
- ☐ NO PERMIT REQ.

REV	REVISED BY	DATE	REVISION DESCRIPTION
4			
3			
2			
1			
0	JIORTEGA	5-18-22	JOB CREATED

NATURAL GAS YES☐ NO☐

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL STLT
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT _____ PHONE _____
BILLING ACCT NO.
FIS JO T3417580 MAP 1/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO _____ AMP VERSION _____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

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SHEET NUMBER 1 OF 5

CONTACTS:

DESIGN CONSULTANT:
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MOBILE:(602)475-8105

PROJECT LEADER:
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MOBILE:(602)236-0432

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)236-1113

NOTICE

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OH= _____
UG= T3417579
SER= _____

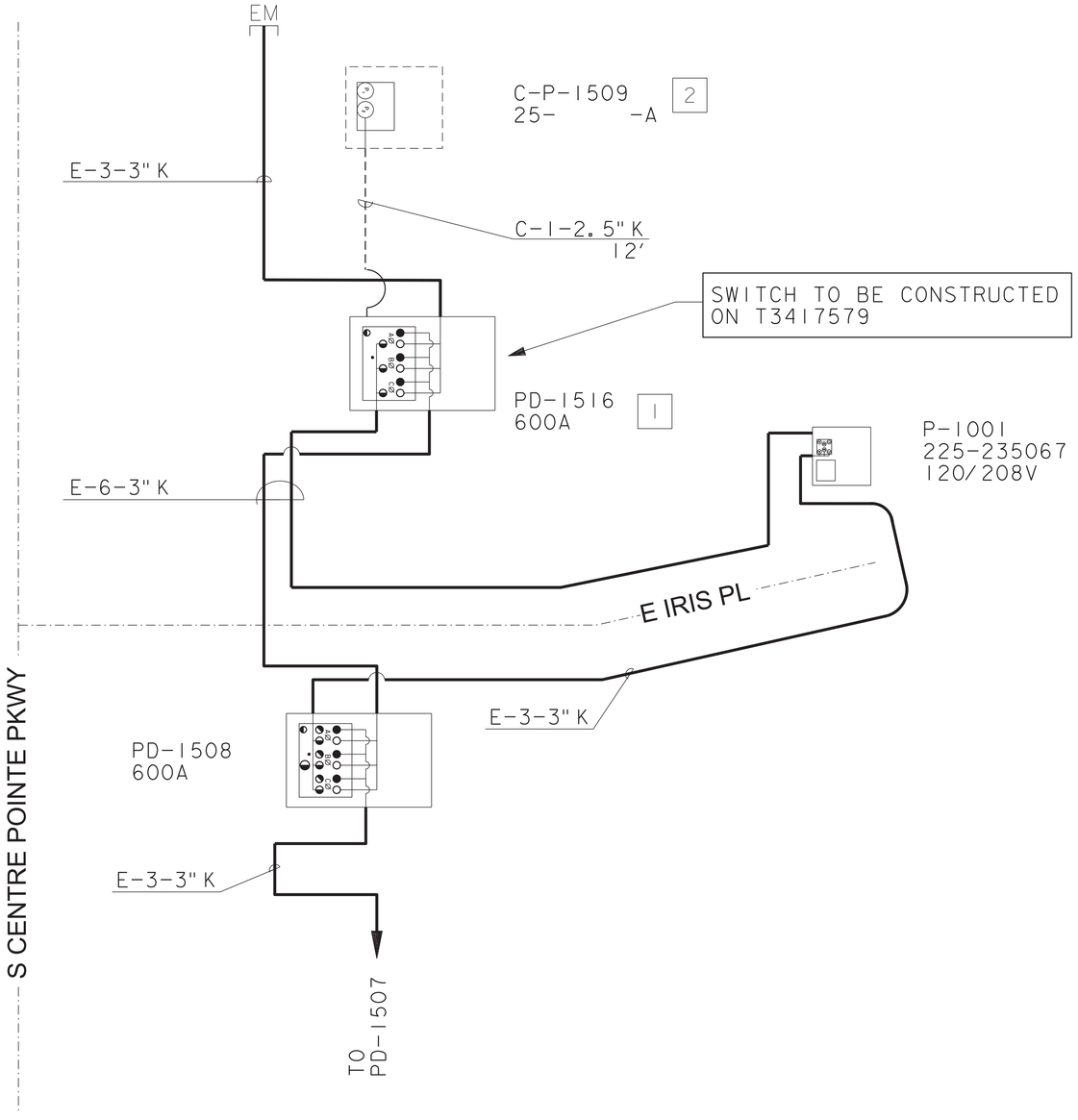
CONDUIT ONE-LINE

CONDUITS ARE AS FOLLOWS
UNLESS NOTED OTHERWISE ON SKETCH

C-UK33 (C-3-3")

✗ TRANSITION FROM SPOOLED TO HARDSTICK

HASH MARKS INDICATE ABANDON



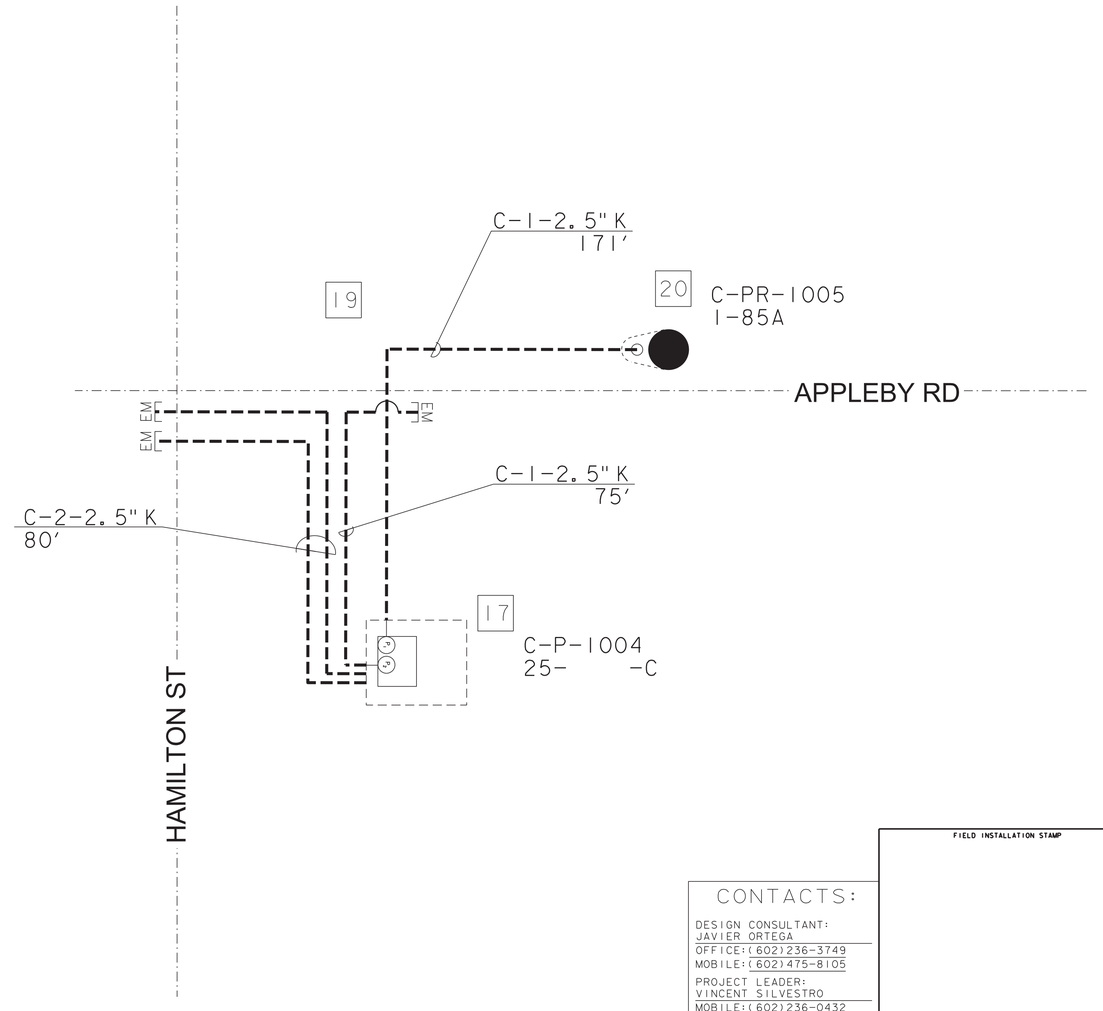
CONDUIT ONE-LINE

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✗ TRANSITION FROM SPOOLED TO HARDSTICK

HASH MARKS INDICATE ABANDON

N. T. S.



FIELD INSTALLATION STAMP

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MOBILE: (602) 236-1113

NOTICE

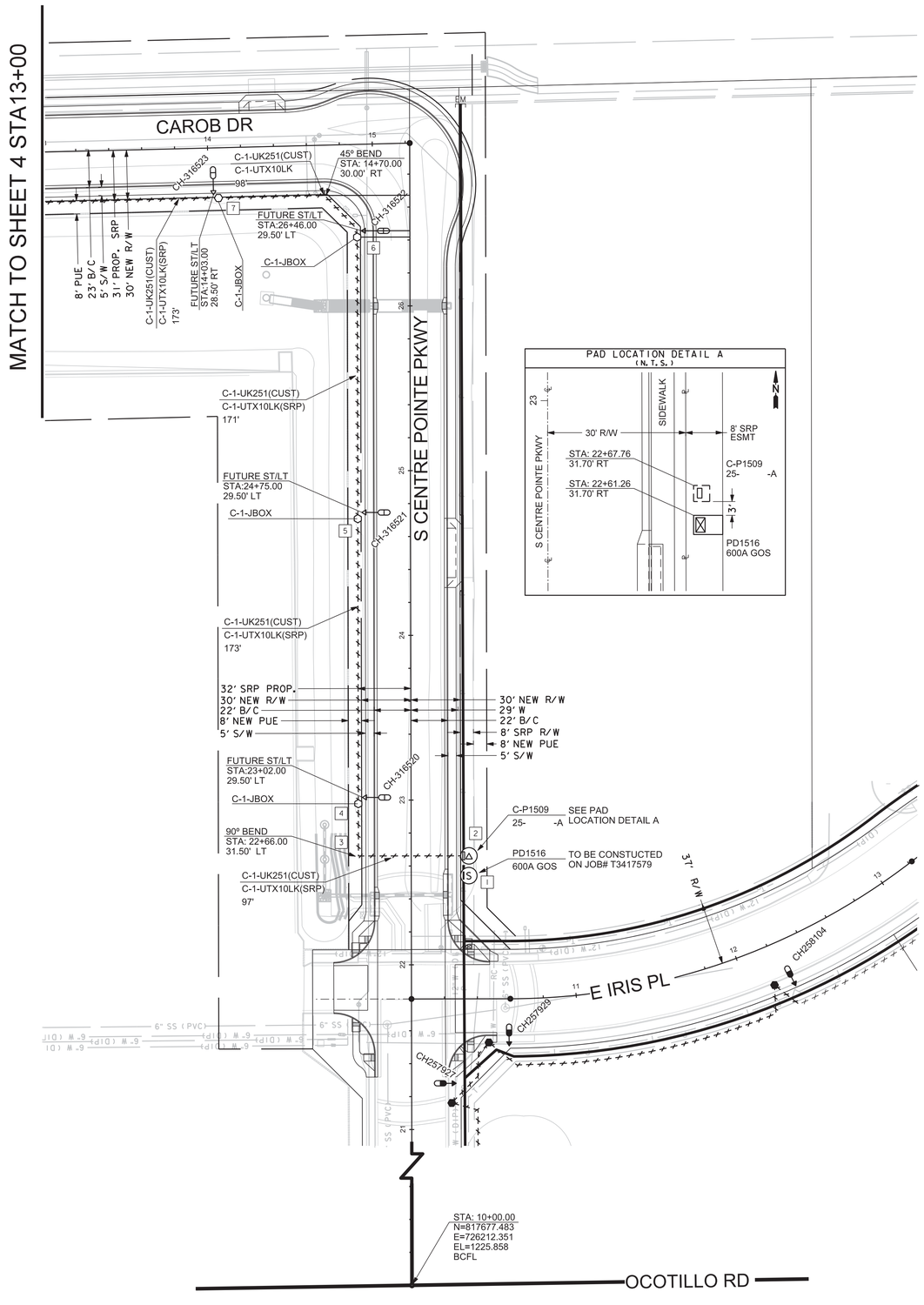
THIS JOB ORDER INVOLVES
OVERHEAD, UNDERGROUND
AND/ OR SERVICES
OH# ____
UG# T3417579
SER# ____

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL STLT
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT ____ PHONE ____
BILLING ACCT NO. ____
FIS JO T3417580 MAP 1/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO ____ AMP VERSION ____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Arizona811
Call 811 or click Arizona811.com

SHEET NUMBER 2 OF 5

MAIN LINE



N

1" = 40'

FIELD INSTALLATION STAMP

CONTACTS:

DESIGN CONSULTANT:
JAVIER ORTEGA
OFFICE:(602)236-3749
MOBILE:(602)475-8105

PROJECT LEADER:
VINCENT SILVESTRO
MOBILE:(602)236-0432

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)236-1113

NOTICE

THIS JOB ORDER INVOLVES OVERHEAD, UNDERGROUND AND/ OR SERVICES
OH# _____
UG# T3417579
SER# _____

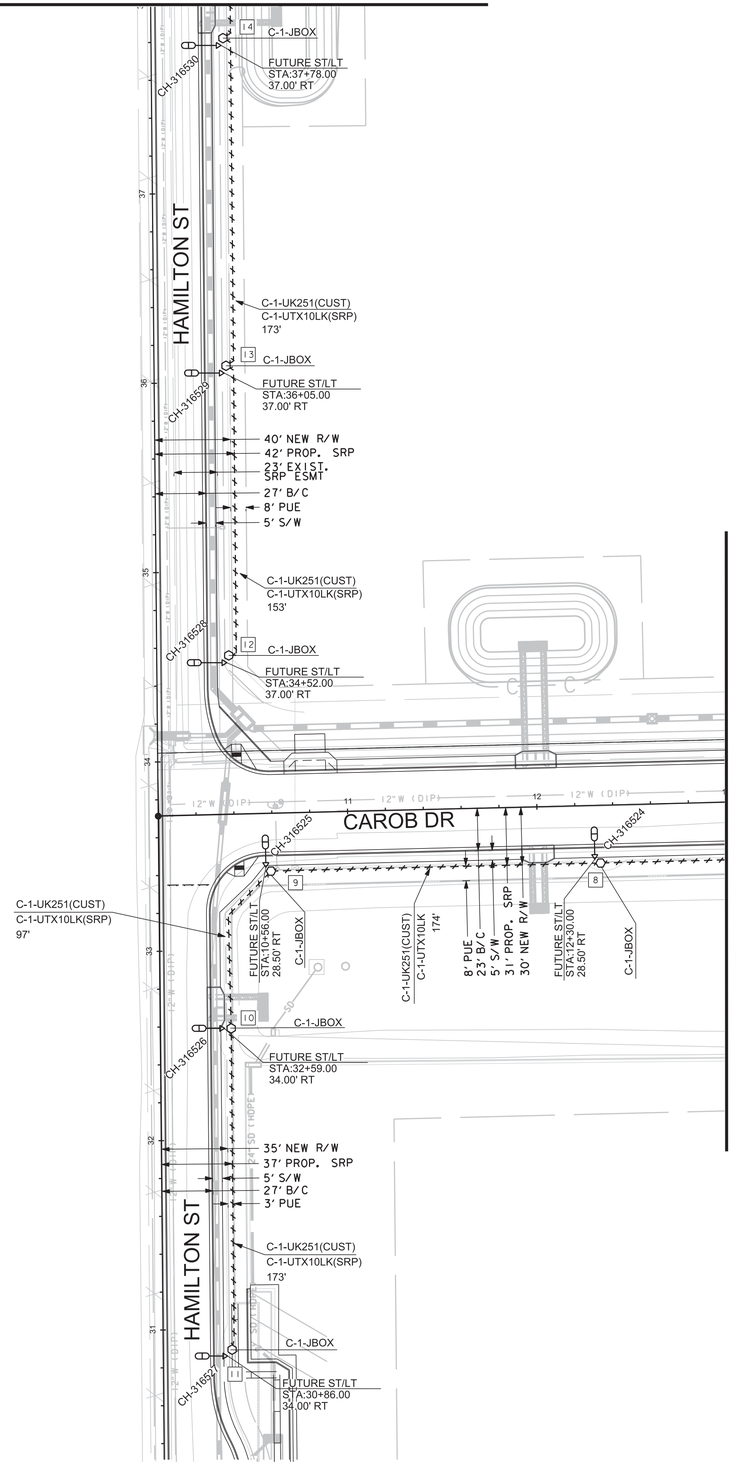
JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL STLT
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT _____ PHONE _____
BILLING ACCT NO. _____
FIS JO T3417580 MAP I/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO _____ AMP VERSION _____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Arizona811 Call 811 or click Arizona811.com

SHEET NUMBER 3 OF 5

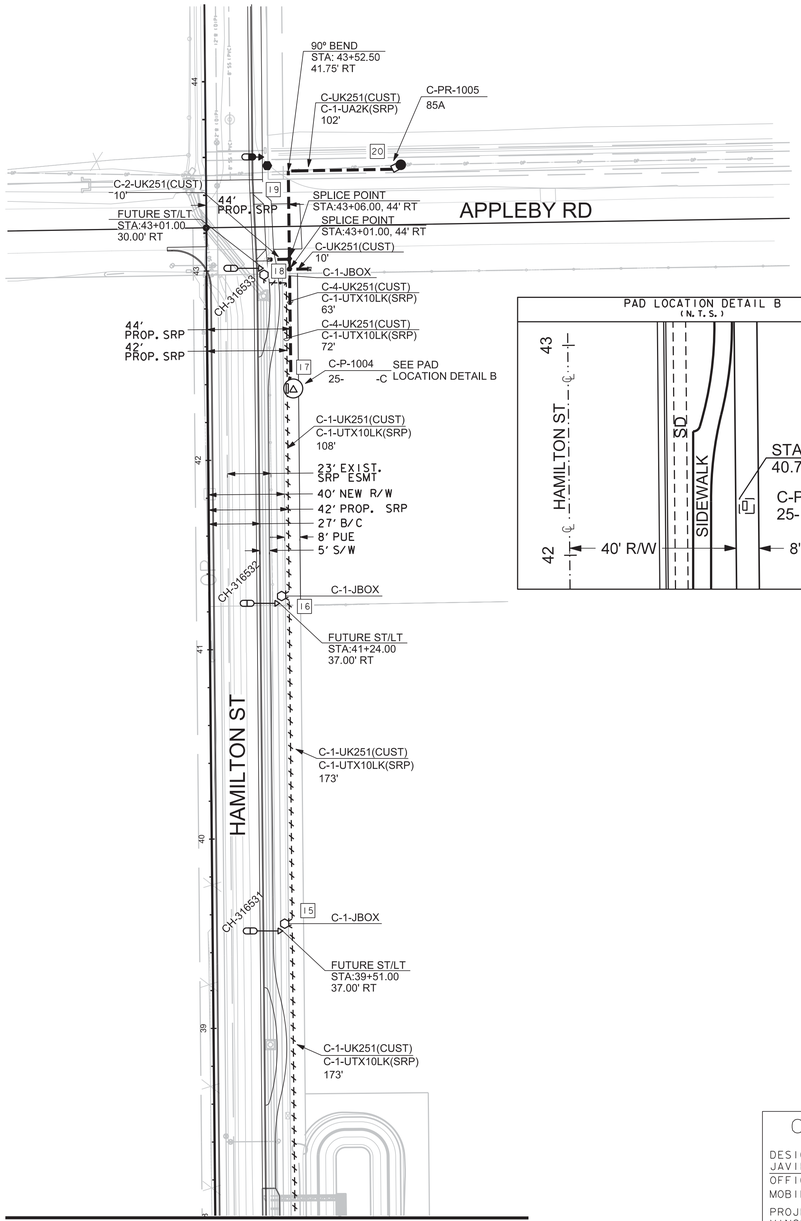
MAIN LINE

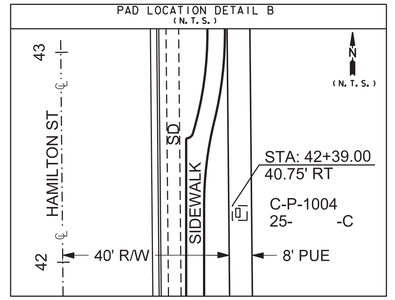
MATCH TO SHEET 4 BOTTOM RIGHT
STA:38+00



MATCH TO SHEET 3 STA:13+00

MAIN LINE





N
1" = 40'

MATCH TO SHEET 4 TOP LEFT
STA: 38+00

FIELD INSTALLATION STAMP

CONTACTS:

DESIGN CONSULTANT:
JAVIER ORTEGA
OFFICE:(602)236-3749
MOBILE:(602)475-8105

PROJECT LEADER:
VINCENT SILVESTRO
MOBILE:(602)236-0432

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)236-1113

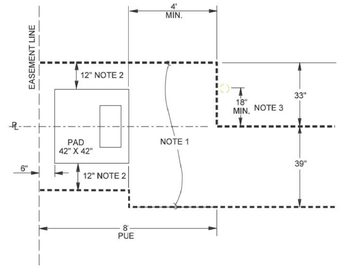
NOTICE

THIS JOB ORDER INVOLVES OVERHEAD, UNDERGROUND AND/ OR SERVICES
OH# ____
UG# T3417579
SER# ____

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL STLT
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT ____ PHONE ____
BILLING ACCT NO. ____
FIS JO T3417580 MAP I/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO ____ AMP VERSION ____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

SHEET NUMBER 4 OF 5

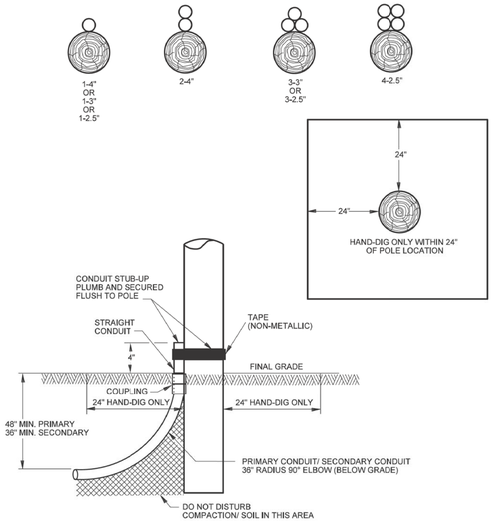


NOTES

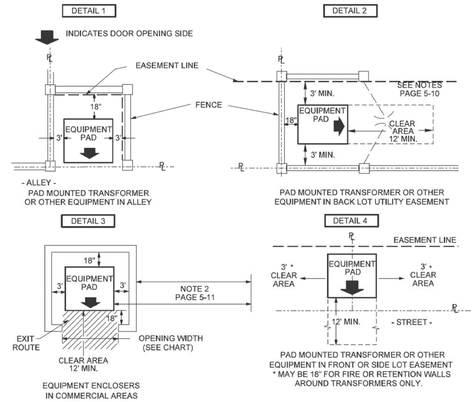
1. No Telco or CATV pedestals, water boxes, poles, permanent obstructions or tripping hazards between lines. Clear area is from PUE (house side) to street, or 12' maximum in front of pad.
2. This 12" minimum dimension describes the space requirement between the SRP pad and the Telco or CATV pedestal. When stubbing up Telco or CATV conduit, allow additional space to ensure the Telco or CATV pedestal does not enter the 12" minimum space.
3. If a light pole or other utility is required in this area, it is preferred that it be installed a minimum of 18" from the property line.
4. Bonding shall be provided between all above ground metallic power and communications apparatus (pedestals, terminals, apparatus cases, transformer cases, metal poles, etc.) that are separated by a distance of 6' or less.

Electric Service Specifications	CLEARANCES CLEAR AREA FOR CUSTOMER EQUIPMENT ADJACENT TO TRANSFORMER	ISSUE DATE: 03/08/89 REV. DATE: 02/23/17 APPROVAL: N.SABBAH
PROPRIETARY MATERIAL	5-14	8509E48.DGN

Required Conduit Configuration to fit Riser Boots
(The quadrant configuration for the pole riser will be specified by the Designer)



Electric Service Specifications	TRENCHING AND CONDUIT POLE RISER ELBOW AND LOCATION	ISSUE DATE: 09/01/09 REV. DATE: 10/14/15 APPROVAL: N.SABBAH
PROPRIETARY MATERIAL	6-4	8509E310.DGN

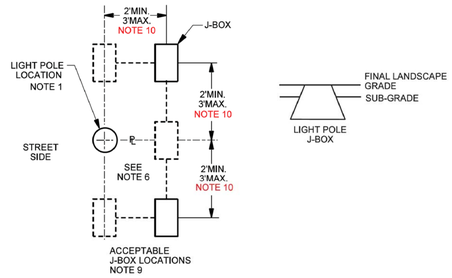


NOTES

The distances shown around equipment pads shall be totally unobstructed. These distances also apply to poles & structures in overhead areas.
EXCEPTION: No pole or structure shall be totally enclosed by a wall or fence with an access gate (upper right diagram not allowed in overhead areas).

TYPE OF EQUIPMENT	MINIMUM OPENING WIDTH
All Except 3Ø Transformers Below	6 1/2'
150 - 500 kVA Transformers	10'
750 - 1,000 kVA Transformers	12'
1,500 - 2,500 kVA Transformers	12'

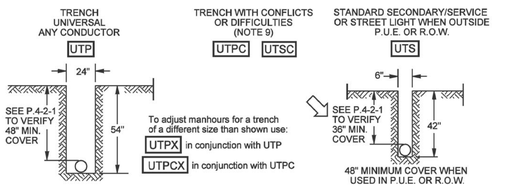
Electric Service Specifications	CLEARANCES CUSTOMER FENCING, EQUIPMENT OR OBSTRUCTIONS ADJACENT TO SRP EQUIPMENT INSTALLATIONS	Page 1 of 3 ISSUE DATE: 04/15/86 REV. DATE: 06/06/17 APPROVAL: N.SABBAH
PROPRIETARY MATERIAL	5-11	8509E45.DGN



NOTES

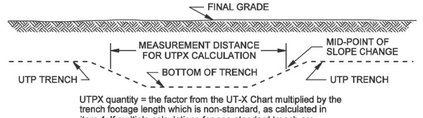
1. CUSTOMER TO STAKE LIGHT LOCATION PER APPROVED MUNICIPAL PLAN.
2. GRADE STAKE TO BE WITHIN 2 FEET OF J-BOX LOCATION. CUSTOMER TO STAKE J-BOX LOCATION. AVOID CONFLICT WITH SIDEWALK, LANDSCAPING, ETC.
3. GROUND ROD TO BE INSTALLED FOR EACH STREET LIGHT LOCATION PER STANDARDS ON PAGE 9-1-1.
4. SEE SONOTUBE INSTALLATION DETAIL, PAGE 9-1-1, IF APPLICABLE.
5. #6 BARE COPPER GROUND WIRE TO BE ATTACHED FROM GROUNDING LUG ON STREET LIGHT POLE TO GROUND ROD IN J-BOX.
6. J-BOX MAY BE POSITIONED BEHIND THE POLE, EXCEPT IN THE CITIES OF CHANDLER AND GILBERT.
7. IF POLE IS IN PROXIMITY OF METALLIC APPARATUS SEE CONSTRUCTION STANDARDS SECTION, LIGHT POLES IN PROXIMITY OF METALLIC APPARATUS, BONDING. ALSO SEE SECTION 3 "ELECTRIC SERVICE REQUIREMENTS NOTE 6".
8. FOR PEDESTAL MOUNTED POLES THE J-BOX IS LOCATED ABOVE THE WATER LINE. SEE POLE PLACEMENT, WATER RETENTION BASIN.
9. SOME CLEARANCE RESTRICTIONS APPLY TO J-BOX LOCATIONS NEAR TRANSFORMERS. SEE DESIGN AMD MISCELLANEOUS, CLEAR AREA FOR CUSTOMER EQUIPMENT, ADJACENT TO TRANSFORMER.
10. FOR MUNICIPAL OWNED STREETLIGHT RELOCATIONS, THE DISTANCE FROM J-BOX TO STREETLIGHT MAY BE INCREASED UP TO 15'.

Outdoor Lighting Standards	REV. ADDED NOTE 10 DESIGN AND MISCELLANEOUS STREETLIGHT POLE J-BOX LOCATION DETAILS	ISSUE DATE: 11/19/01 REV. DATE: 5/18/20 APPROVAL: J. Luera
PROPRIETARY MATERIAL	3-11-1	8518E90.DGN



NOTES:

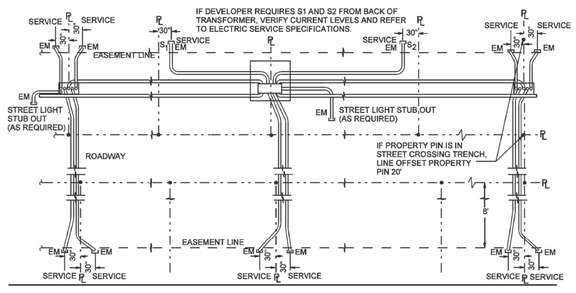
1. Trench depths and conduit cover are to be measured from final grade stakes. All trench depths or conduit cover requirements specified on a job drawing shall be followed.
2. These trench codes provide man-hours for excavation only and do not provide for trench backfill.
3. The total trench footage length will be shown in the grid as standard trench, either UTP for primary or UTS for secondary, street light, or service. When trench is provided by customer, this is the only coding required on the job grid.
4. Non standard trench locations will be identified on the job order sketch with required width and depth dimensions given.
5. When trenching is provided by SRP, non standard trenches shall have 2 compatible unit codes in the grid, UTP plus the UTPX, to adjust the time for digging.
6. When specified depth cannot be obtained because of solid rock, a minimum earth cover of 24" is acceptable, provided a minimum 2" encasement of concrete surrounds the conduit.
7. Use example shown to figure length of UTPX trench, unless the entire trench is non standard.

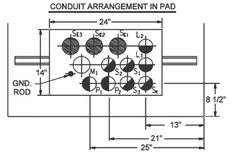


UTPX quantity = the factor from the UT-X Chart multiplied by the trench footage length which is non-standard, as calculated in item 4. If multiple calculations for non-standard trench are made, add all totals together, only one entry is needed for UTPX quantity in the grid.

8. If secondary/service or street light must be placed in P.U.E. or road R.O.W.,use UTP trench dimensions and enter UTS as the compatible unit.
9. Provides 1.5 times regular man-hours.
10. Trench bottom to be smooth and free of sharp rocks. Where excavation is in rock, bottom of trench to have protective layer of clean, level, tamped backfill or sand.

Underground Distribution Construction Standards	REV. CORRECTED TRENCH DEPTH TYPO. TRENCHING EXCAVATION CODES	Page 1 of 2 ISSUE DATE: 01/15/87 REV. DATE: 03/06/13 APPROVAL: B.PRIEST
PROPRIETARY MATERIAL	6-11-1	8513E135.DGN

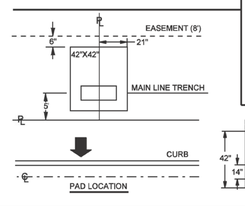




THE MAX. NO. OF SERVICE & SECONDARY CONDUITS IS 8.
S1 ⓢ - SECONDARY CONDUIT 3"
L ⓛ - LIGHT CONDUIT 2-1/2"
S ⓢ - SERVICE CONDUIT 2-1/2"
P ⓟ - PRIMARY CONDUIT 2-1/2"
M1 Ⓜ - M1 MAY BE A SERVICE OR A SECONDARY.
2 1/2" O.D. = 2.875"
3" O.D. = 3.5"

NOTES:

1. CONNECT GROUND ROD TO TRANSFORMER GROUND LUG WITH #4 CU WIRE.
2. TOP OF GROUND ROD AND ALL CONDUITS ARE TO BE 5 INCHES ABOVE FINAL GRADE FOR ALL NEW TRANSFORMER INSTALLATIONS.
3. ALL REQUIRED CONDUITS SHALL BE INSTALLED PRIOR TO BACKFILL.
4. INSTALL PLUGS IN ALL CONDUIT STUB-UPS. DO NOT GLUE PLUGS.
5. IF ONLY ONE SECONDARY IS TO BE INSTALLED, PLACE IT IN POSITION SE2
6. IF NO SECONDARY NEEDED, SE1, SE2 & SE3 MAY BE USED FOR SERVICES 6, 7 & 8.

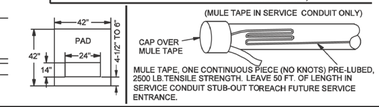


SECONDARY/SERVICE CONDUIT MARKING & MULE TAPE
(BY PARTY INSTALLING THE CONDUIT)

PRINT LOT # INSIDE CONDUIT BACK SIDE FACING STREET. ALSO MARK "SPARE" CONDUIT.

CONDUIT PLUG

MULE TAPE,PRE-LUBED, 2500 Lb.TENSILE STRENGTH MIN. (INSIDE SECONDARY & LIGHTING SERVICE CONDUIT ONLY)

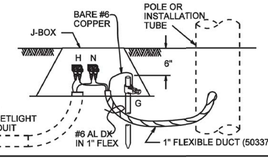


(MULE TAPE IN SERVICE CONDUIT ONLY)

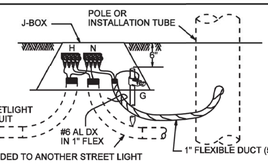
MULE TAPE, ONE CONTINUOUS PIECE (NO KNOTS) PRE-LUBED, 2500 LB.TENSILE STRENGTH. LEAVE 50 FT. OF LENGTH IN SERVICE CONDUIT STUB-OUT TOREACH FUTURE SERVICE ENTRANCE.

Underground Distribution Construction Standards	REV: REFORMAT. TRANSFORMERS SINGLE PHASE RESIDENTIAL TRANSFORMER PAD CONDUIT STUB-UP DETAIL WITH ABOVE GROUND JUNCTION BOXES (BACK OF PUE)	PAGE 1 OF 6 ISSUE DATE: 04/30/93 REV. DATE: 09/26/12 APPROVAL:B.PRIEST
PROPRIETARY MATERIAL	9-11-1	8513E170.DGN

RADIAL LIGHT
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (#6 DX)
H = 120V
N = NEUTRAL
G = GROUND ROD
ULR6D FLEX DUCT
ULR6DG CONTRACTOR
NOTE 2

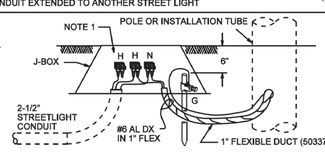


SERIES LIGHTS
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (#6 DX)
H = 120V
N = NEUTRAL
G = GROUND ROD
ULS6D FLEX DUCT
ULS6DG CONTRACTOR
NOTE 2

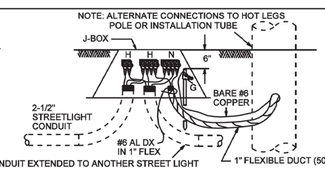


2 1/2" CONDUIT EXTENDED TO ANOTHER STREET LIGHT

RADIAL LIGHT
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (1/0 TX)
H = 120V
N = NEUTRAL
G = GROUND ROD
ULR10 FLEX DUCT
ULR10G CONTRACTOR
NOTE 2



SERIES LIGHTS
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (1/0 TX)
H = 120V
N = NEUTRAL
G = GROUND ROD
ULS10 FLEX DUCT
ULS10G CONTRACTOR
NOTE 2

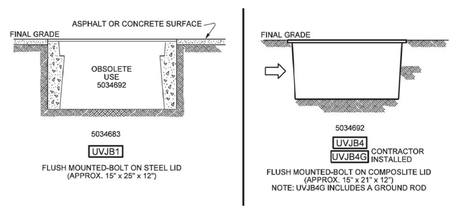


2 1/2" CONDUIT EXTENDED TO ANOTHER STREET LIGHT

NOTE 1) SECOND (UNUSED) HOT LEG OF 1/0 AL TX MUST BE INSULATED WITH MOLE ASSEMBLY.

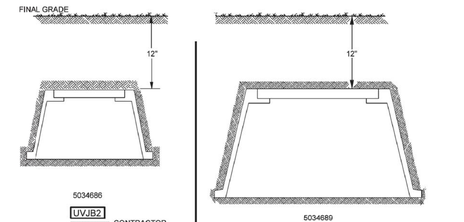
NOTE 2) IF POLE IS PLACED WITHIN 6 FEET OF ANY ABOVE GROUND METALLIC POWER OR COMMUNICATIONS APPARATUS SEE DESIGN AND MISCELLANEOUS SECTION, "NON-MUNICIPAL LUMINAIRE POLE PLACEMENT", AND CONSTRUCTION STANDARDS SECTION "LIGHT POLES IN PROXIMITY OF METALLIC APPARATUS, BONDING".

Outdoor Lighting Standards	CONSTRUCTION STANDARDS J-BOX CONNECTIONS	ISSUE DATE: 01/12/00 REV. DATE: 11/01/13 APPROVAL:W.LARAMIE
PROPRIETARY MATERIAL	6-6-1	8518E128.DGN



NOTES

1. CARE MUST BE TAKEN TO PROVIDE A SMOOTH,LEVEL WELL COMPACTED BASE TO SET THE BOX ON. COMPACT AROUND SIDES OF BOX TO PREVENT SETTLING.



Underground Distribution Construction Standards	VAULTS, MANHOLES AND BOXES JUNCTION BOX INSTALLATION	ISSUE DATE: 01/15/87 REV. DATE: 05/09/16 APPROVAL: N.SABBAH
PROPRIETARY MATERIAL	7-3-1	8513E21.DGN

JOB NAME CUS UE CENTER POINTE PKWY & IRIS PL STLT
ADDRESS/LOCATION 720 E IRIS PL CHANDLER, AZ 85286
CONTACT ____ PHONE ____
BILLING ACCT NO. ____
FIS JO T3417580 MAP I/4 SE S 15 T 2S R 5E
40/ACRE YE-15-10 COORDS 27 5/8E 8 11/16S
AMP WO ____ AMP VERSION ____
COST CENTER 22660
ROUTING CODE DD1.5 CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Arizona811.com
Call 811 or click Arizona811.com

SHEET NUMBER 5 OF 5