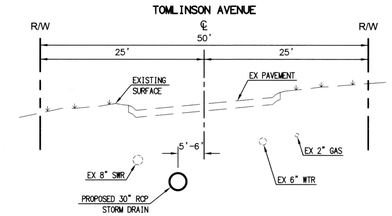
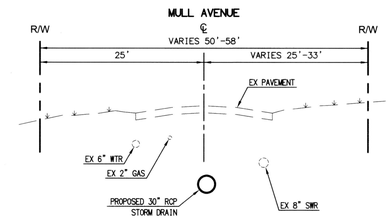
RIVERSIDE CALIFORNIA

PUBLIC WORKS DEPARTMENT
2018-2019 CDBG
TOMLINSON STORM DRAIN IMPROVEMENTS



TYPICAL SECTION
NOT TO SCALE

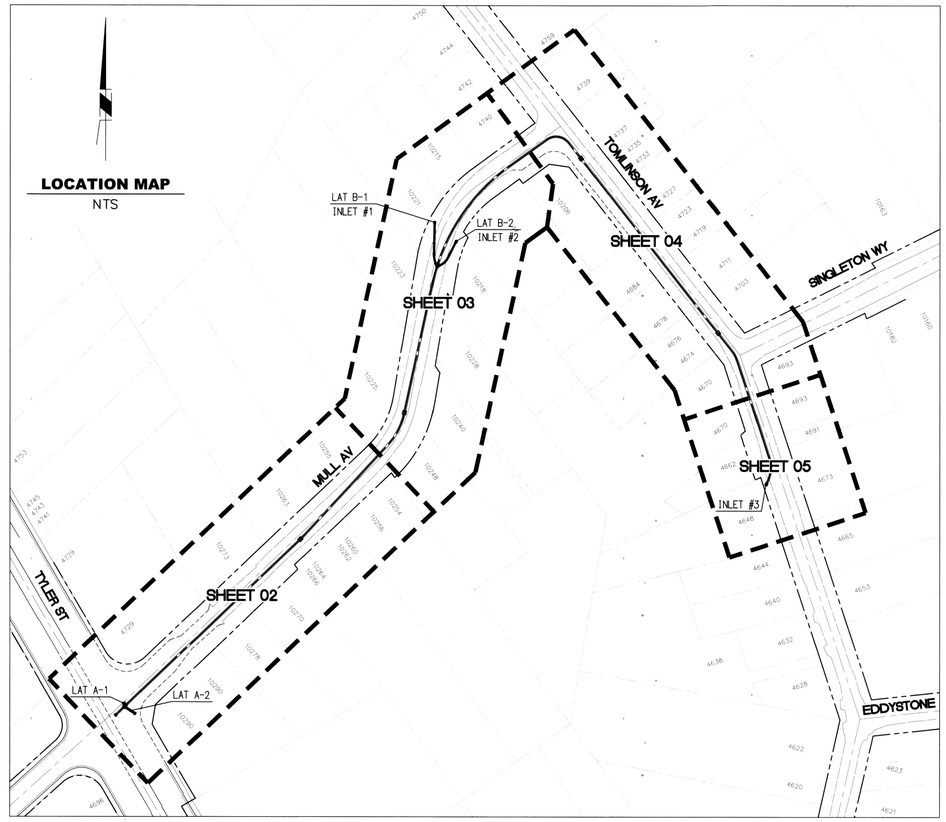


TYPICAL SECTION
NOT TO SCALE

CONSTRUCTION NOTES:

- NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY. UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR COVER SHEET. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.
- ADJ XX — ADJUST TO GRADE, DESCRIPTION PER PLAN: (MH) MANHOLE. (GV) GATE VALVE. (WM) WATER METER. (PB) PULLBOX. (MB) MAIL BOX. (CO) CLEAN OUT.
- PIP XX — PROTECT IN PLACE, DESCRIPTION PER PLAN: (CL) CHAIN LINK FENCE. (FH) FIRE HYDRANT. (MB) MAILBOX. (WM) WATER METER.
- REM XX — REMOVE AND DISPOSE OF EXISTING IMPROVEMENTS, DESCRIPTION PER PLAN: (SD) STORM DRAIN LINE/JUNCTION STRUCTURE/RELATED APPURTENANCES.
- REM AC — SAWCUT EXISTING PAVEMENT AND REMOVE ALL EXISTING IMPROVEMENTS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
- RCP 18" — FURNISH AND INSTALL 18" RCP, (D-LOAD: PER PLAN).
- RCP 24" — FURNISH AND INSTALL 24" RCP, (D-LOAD: PER PLAN).
- RCP 30" — FURNISH AND INSTALL 30" RCP, (D-LOAD: PER PLAN).
- 452 XX — CONSTRUCT PIPE BEDDING PER CITY OF RIVERSIDE STANDARD NO. 452, CASE PER PLAN, GRANULAR MATERIAL SHALL BE SAND, UNLESS OTHERWISE SPECIFIED ON PLAN.
- DG XX — OVERLAY OR CONSTRUCT NEW DGAC PAVEMENT. REPLACEMENT DEPTH SHALL MATCH AC THICKNESS TO BE REMOVED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUPPLY AND INSTALL REDWOOD HEADER WHERE NECESSARY OR AS INSTRUCTED BY THE ENGINEER.
- ARAM — CONSTRUCT ASPHALT RUBBER AND AGGREGATE MEMBRANE.
- CM2 — 0.15' MIN. DEPTH COLD MILL OF EXISTING AC PAVEMENT.
- OL XX — CONSTRUCT ARHM-GG AC OVERLAY. REPLACEMENT DEPTH SHALL MATCH AC THICKNESS TO BE REMOVED, UNLESS OTHERWISE NOTED.
- 220 — CONSTRUCT CROSS GUTTER PER CITY OF RIVERSIDE STANDARD NO. 220 – INCLUDES SAW-CUTTING, REMOVAL, AND DISPOSAL OF EXISTING CROSS GUTTER.
- 432 XX — CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STANDARD NO. 432 WITH THE FOLLOWING MODIFICATION (XX): (M1) = MODIFY STRUCTURE THICKNESS AT LATERAL A-1 TO T=8.5" AND ENCASE EXISTING PIPE 1.0 FOOT, OR AS NECESSARY TO ADEQUATELY ACCOMMODATE SLOPE DIFFERENTIAL. (I.E. EXISTING PIPE SHALL CONNECT AT 10+05, WHILE STRUCTURE SHALL EXTEND AROUND PIPE TO 10+06).

LOCATION MAP
NTS



GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC AS INDICATED IN THE ASSOCIATED PROJECT SPECIAL PROVISIONS.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION.
3. EXISTING UTILITIES SHOWN ON THIS PLAN ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN.
4. CONFLICTING UTILITIES SHOWN WITHIN CONSTRUCTION AREA WILL BE RELOCATED PRIOR TO CONSTRUCTION.
5. ALL STREET PULL BOXES, GATE VALVES, MANHOLES, ETC, AFFECTED BY CONSTRUCTION, SHALL BE ADJUSTED TO THE PROPOSED GRADE.
6. CONTRACTOR/SUBCONTRACTOR BIDDING THE WORK ON THIS PLAN SHALL HAVE A CLASS "A" OR "C-34".
7. THE SEAM BETWEEN PASSES OF THE AC OVERLAY SHALL COINCIDE, AS CLOSE AS POSSIBLE, TO THE LANE LINES.
8. COLD MILLING SHALL BE AS DESCRIBED ON THE PLANS AND SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.
9. ANY DISTRESSED EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEERING AFTER COLD-MILLING AND PRIOR TO PLACEMENT OF DGAC.
10. ALL EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO: CURB, GUTTERS, AC BERM, CROSS GUTTERS, SIDEWALK, DRIVEWAYS, PARKWAY CULVERTS, INLETS, ETC, SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
11. EXISTING IRRIGATION SHALL BE PROTECTED OR MODIFIED, INCLUDING FURNISHING NEW MATERIALS, AS NECESSARY TO CONSTRUCT NEW CONCRETE IMPROVEMENTS.
12. ADEQUATE FLOW LINES SHALL BE MAINTAINED AT ALL LOCATIONS.
13. THE CONTRACTOR SHALL CALL IN A UTILITY LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) TOLL FREE 811, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND UTILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A..
14. THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY AGENCIES REGARDING TEMPORARY SUPPORT AND SHORING REQUIREMENTS FOR THE VARIOUS UTILITY CROSSINGS SHOWN ON THESE PLANS. ALL UTILITIES SHALL BE PROTECTED IN PLACE EXCEPT AS NOTED ON PLANS AND SPECIFICATIONS.

EXISTING TOPOGRAPHY:

- SANITARY SEWER M.H.
- STORM DRAIN M.H.
- ELECTRIC M.H.
- WATER M.H.
- TELEPHONE M.H.
- TRAFFIC SIGN
- CATCH BASIN
- ELECTRICAL TEST STATION (PIPELINE)
- GATE VALVE
- FIRE HYDRANT
- BLOW-OFF VALVE
- WATER METER
- STREET LIGHT ON MAST ARM
- POWER POLE
- GUY ANCHOR
- PALM TREE
- MISC. TREE
- EDGE OF PAVEMENT

SHEET INDEX

SHEET NO.	DESCRIPTION	
1	TITLE SHEET AND NOTES	
2	STA. 10+00 TO 15+00	MAIN LINE A AND LATERALS A-1 & A-2
3	STA. 15+00 TO 20+00	MAIN LINE A AND LATERALS B-1 & B-2
4	STA. 20+00 TO 25+00	MAIN LINE A
5	STA. 25+00 TO 26+36	MAIN LINE A AND LATERALS A-1, A-2, B-1, & B-2

AS Built 5/02/23 B.O

BENCHMARK: F3-L3

P.K. NAIL AND CITY ENGINEER TAG IN THE WESTERLY CURB TYLER ST. 64.5 FEET SOUTHERLY OF THE CENTERLINE INTERSECTION OF TYLER STREET AND OCAMPO STREET

ELEV. – 754.979 (NGVD 1929)

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

CITY OF RIVERSIDE

ENGINEER IN RESPONSIBLE CHARGE
Edward Lara
Edward Lara
R.C.E. No. 63753 EXPIRES: 9-30-20
DATE October 15, 2019

REGISTERED PROFESSIONAL ENGINEER EDWARD LARA No. 63753 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CN DRAWN BY CN CHECKED BY EL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER	EM	10/15/19
CONSTRUCTION ADMIN.	DC	10/17/19
TRAFFIC DIVISION	NJM	10-20-19
SURVEY		
STREETS		10/11/19

APPROVED BY
CITY ENGINEER
DATE OCT. 21, 2019

STORM DRAIN IMPROVEMENTS
2018 - 2019 CDBG
TOMLINSON STORM DRAIN IMPROVEMENTS
TITLE SHEET AND NOTES

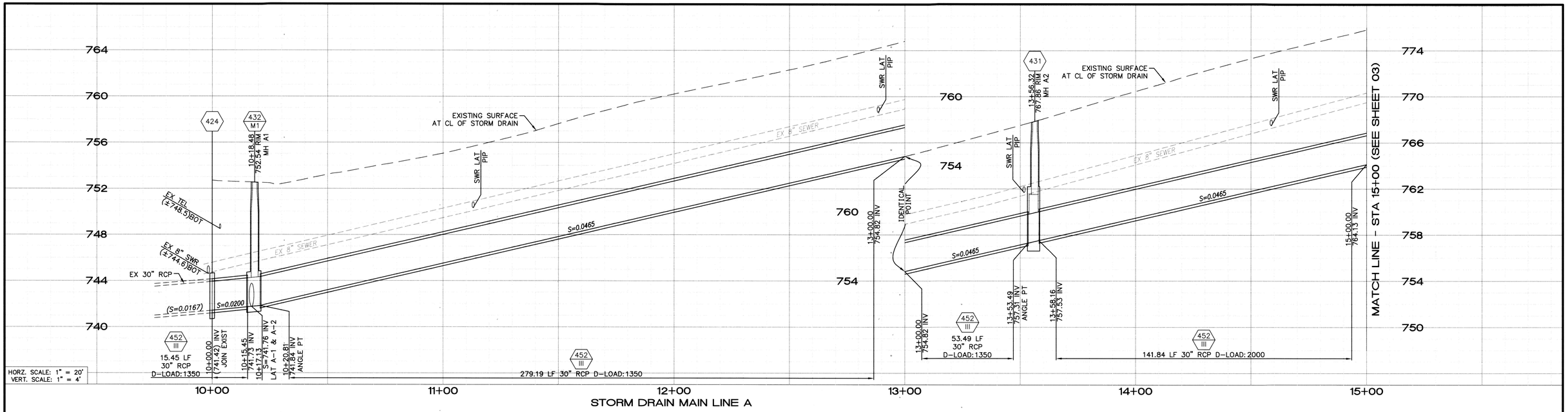
HORIZ. SCALE: NA VERT. SCALE: NA

DESIGN WORK ORDER. NO.: 1917073
CONSTR. WORK ORDER. NO.: 1917074

D-906

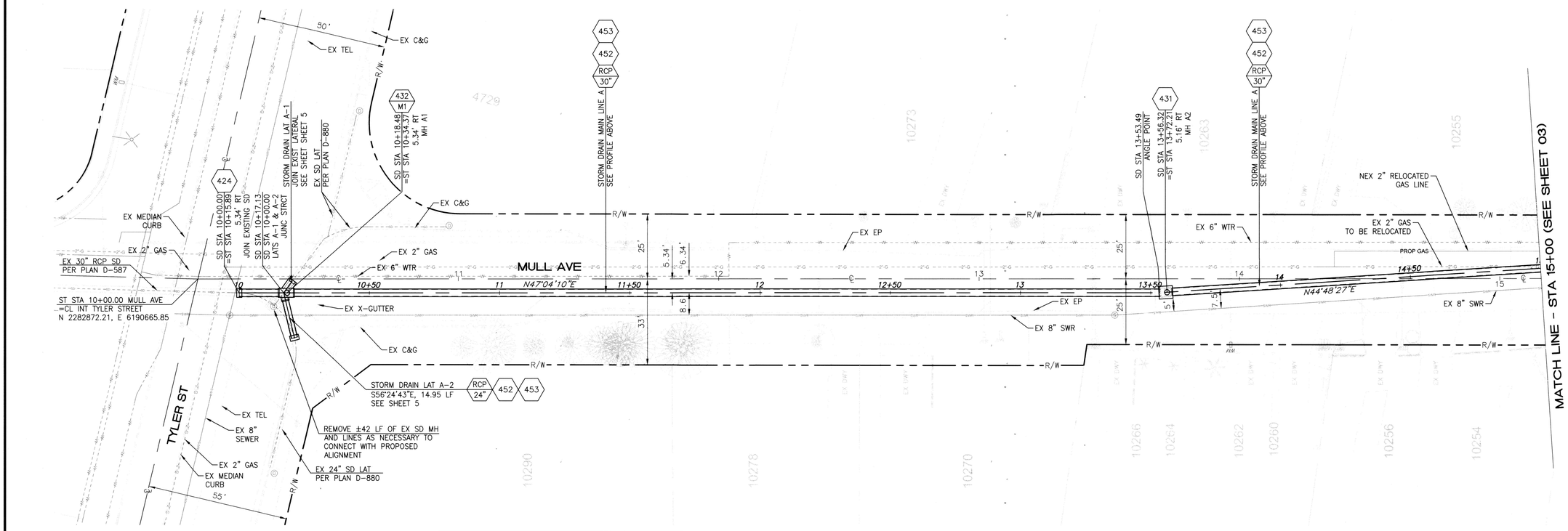
SHEET 01 OF 05

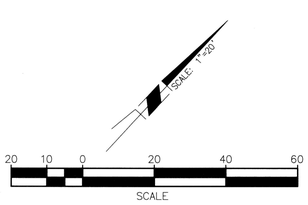
FILE NAME: D906-01.DWG



STORM DRAIN MAIN LINE A

NOTE: LOCATION OF SEWER LATERALS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE LOCATION OF SEWER AND ALL OTHER LATERALS DURING TRENCHING WORK.





STORM DRAIN STRUCTURE DATA TABLE

STRC. NO.	DWG. NO.	MAIN LINE STA.	LATERAL LEFT ANGLE	LATERAL LEFT B	LATERAL LEFT C'	LATERAL RIGHT ANGLE	LATERAL RIGHT B	LATERAL RIGHT C'	D_1	D_2	H	E'	F	T	L	L'	ELEV. R	ELEV. S
MH A1	432	10+18.48	53°25'28"	24"	5.42'	76°31'07"	24"	3.2'	30"	30"	–	4.1'	6"	5.25"	–	6.2'	SEE PROF.	741.76
MH A2	431	13+56.32	–	–	–	–	–	–	30"	30"	4.0'	–	–	8"	4.0'	–	–	–

AS Built 5/02/23 B.O

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

CITY OF RIVERSIDE

ENGINEER IN RESPONSIBLE CHARGE
Edward Lara
Edward Lara
R.C.E. No. 63753 EXPIRES: 9-30-20
DATE October 15, 2019

REGISTERED PROFESSIONAL ENGINEER EDWARD LARA No. 63753 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CN DRAWN BY CN CHECKED BY EL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER	FM	10/15/19
CONSTRUCTION ADMIN.	DL	10/17/19
TRAFFIC DIVISION	NM	10-20-19
SURVEY		10/21/19
STREETS		

APPROVED BY
CITY ENGINEER
DATE OCT. 21, 2019

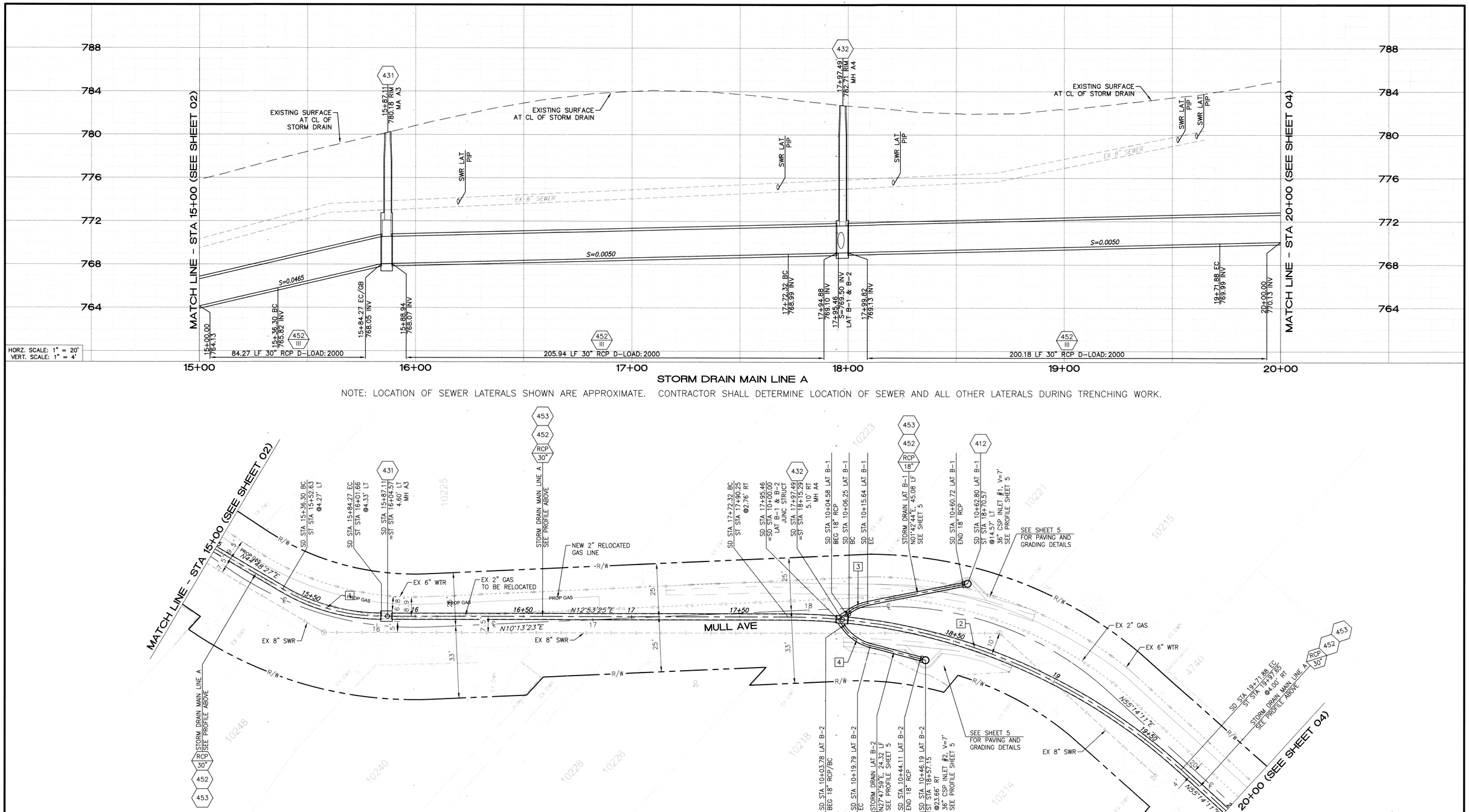
STORM DRAIN IMPROVEMENTS
2018 - 2019 CDBG
TOMLINSON STORM DRAIN
IMPROVEMENTS
10+00 TO 15+00
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=4'

DESIGN WORK ORDER. NO.: 1917073
CONSTR. WORK ORDER. NO.: 1917074

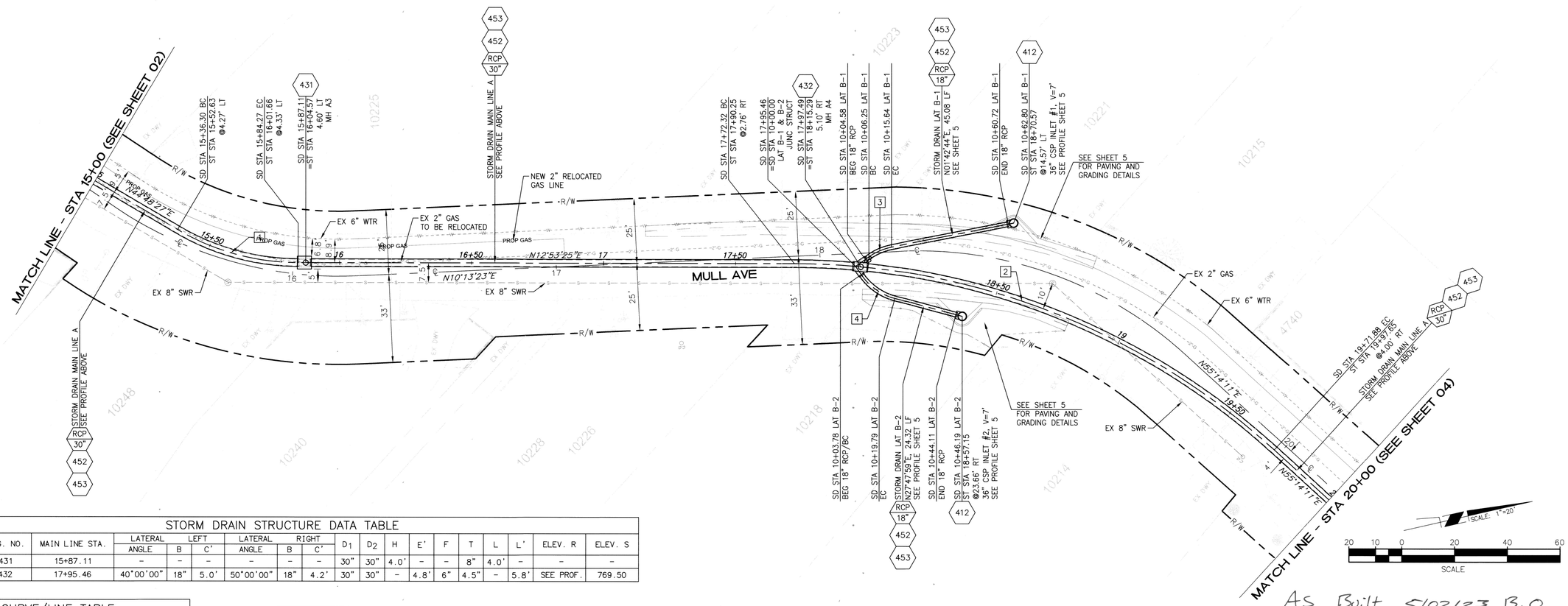
D-906

SHEET 02 OF 05

FILE NAME: D906-02.DWG



NOTE: LOCATION OF SEWER LATERALS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE LOCATION OF SEWER AND ALL OTHER LATERALS DURING TRENCHING WORK.



STORM DRAIN STRUCTURE DATA TABLE																		
STRC. NO.	DWG. NO.	MAIN LINE STA.	LATERAL LEFT ANGLE	LATERAL LEFT B	LATERAL LEFT C'	LATERAL RIGHT ANGLE	LATERAL RIGHT B	LATERAL RIGHT C'	D_1	D_2	H	E'	F	T	L	L'	ELEV. R	ELEV. S
MH A3	431	15+87.11	–	–	–	–	–	–	30"	30"	4.0'	–	–	8"	4.0'	–	–	–
MH A4	432	17+95.46	40°00'00"	18"	5.0'	50°00'00"	18"	4.2'	30"	30"	–	4.8'	6"	4.5"	–	5.8'	SEE PROF.	769.50

CURVE/LINE TABLE				
#	DELTA/BEARING	RADIUS	LENGTH	TANGENT
1	30°32'31"	90.00'	47.98'	24.57'
2	42°20'46"	270.00'	199.55'	104.58'
3	23°54'45"	22.50'	9.39'	4.77'
4	40°00'00"	22.50'	16.01'	8.19'

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TWO WORKING DAYS BEFORE YOU DIG

CITY OF RIVERSIDE

ENGINEER IN RESPONSIBLE CHARGE
Edward Lara
Edward Lara
R.C.E. No. 63753 EXPIRES: 9-30-20
DATE October 15, 2019

REGISTERED PROFESSIONAL ENGINEER EDWARD LARA No. 63753 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CN DRAWN BY CN CHECKED BY EL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER	EM	10/15/19
CONSTRUCTION ADMIN.	DL	10/17/19
TRAFFIC DIVISION	NJM	10-20-19
SURVEY		10/17/19
STREETS		

APPROVED BY CITY ENGINEER
DATE OCT. 21, 2019

STORM DRAIN IMPROVEMENTS
2018 - 2019 CDBG
TOMLINSON STORM DRAIN IMPROVEMENTS
15+00 TO 20+00
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=4'

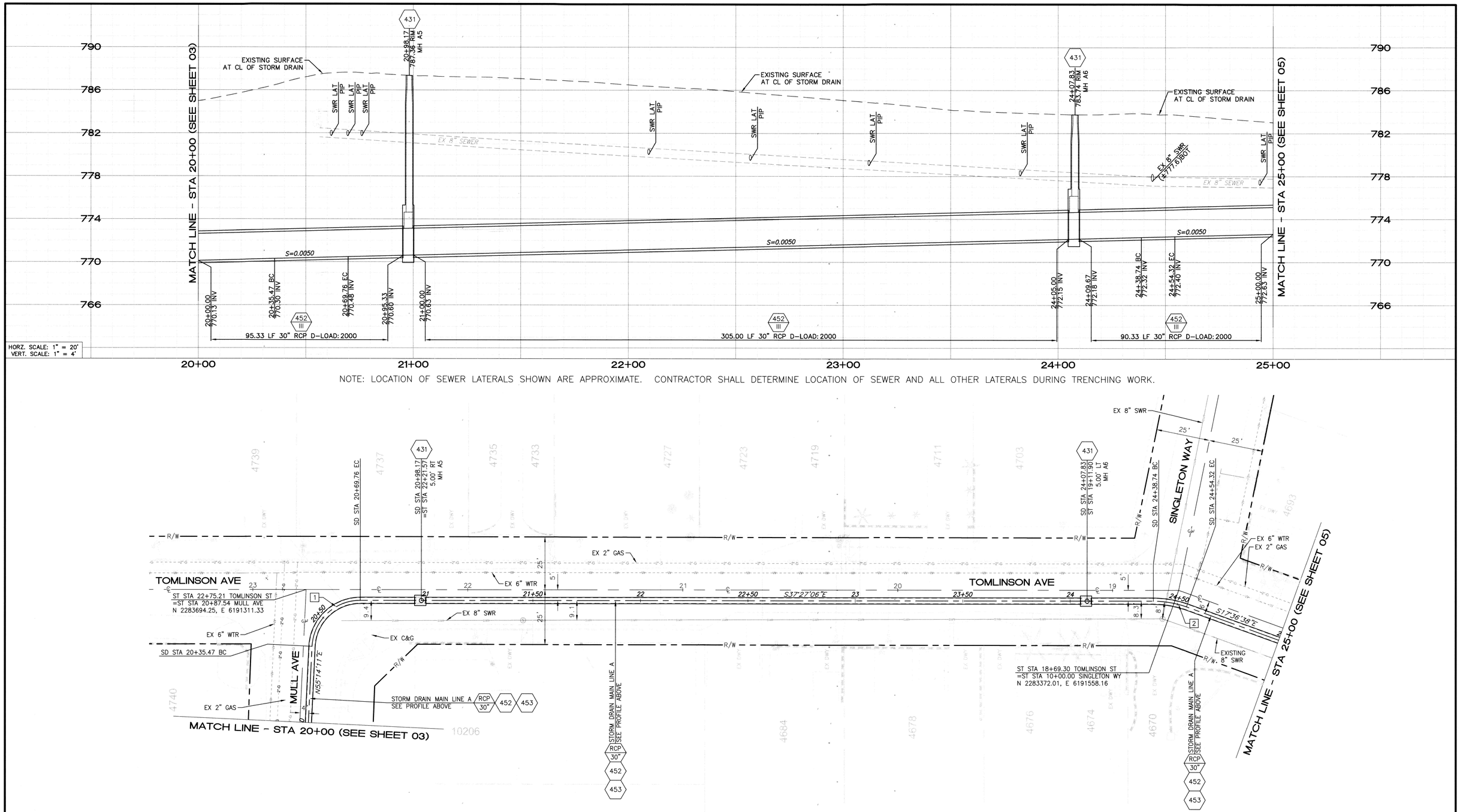
DESIGN WORK ORDER. NO.: 1917073
CONSTR. WORK ORDER. NO.: 1917074

D-906

SHEET 03 OF 05

FILE NAME: D906-03.DWG

As Built 5/02/23 B.O



NOTE: LOCATION OF SEWER LATERALS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE LOCATION OF SEWER AND ALL OTHER LATERALS DURING TRENCHING WORK.

SCALE: 1"=20'

20 10 0 20 40 60
SCALE

STORM DRAIN STRUCTURE DATA TABLE																		
STRC. NO.	DWG. NO.	MAIN LINE STA.	LATERAL LEFT ANGLE	B	C'	LATERAL RIGHT ANGLE	B	C'	D_1	D_2	H	E'	F	T	L	L'	ELEV. R	ELEV. S
MH A5	431	20+98.17	–	–	–	–	–	–	30"	30"	4.0'	–	–	8"	4.0'	–	–	–
MH A6	432	24+07.83	–	–	–	–	–	–	30"	30"	4.0'	–	–	8"	4.0'	–	–	–

CURVE/LINE TABLE				
#	DELTA/BEARING	RADIUS	LENGTH	TANGENT
1	87°18'43"	22.50'	34.29'	21.47'
2	19°50'28"	45.00'	15.58'	7.87'

As Built 05/02/23 B.O.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

CITY OF RIVERSIDE

ENGINEER IN RESPONSIBLE CHARGE
Edward Lara
Edward Lara
R.C.E. No. 63753 EXPIRES: 9-30-20
DATE October 15, 2019

REGISTERED PROFESSIONAL ENGINEER EDWARD LARA No. 63753 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CN DRAWN BY CN CHECKED BY EL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER	EM	10/15/19
CONSTRUCTION ADMIN.	DC	10/17/19
TRAFFIC DIVISION	JM	10·10·19
SURVEY		10/17/19
STREETS		

APPROVED BY
CITY ENGINEER
DATE OCT. 21, 2019

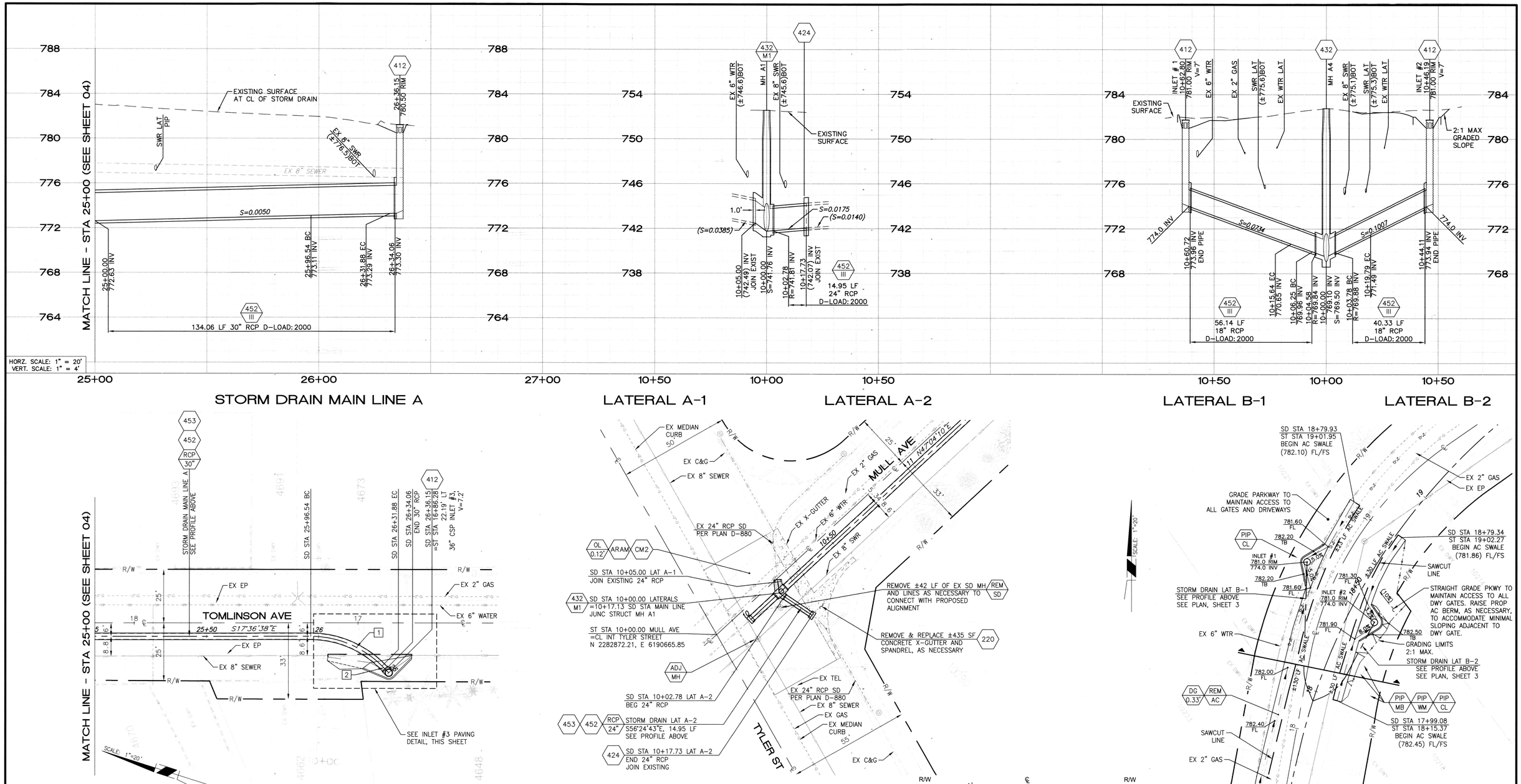
STORM DRAIN IMPROVEMENTS
2018 - 2019 CDBG
TOMLINSON STORM DRAIN IMPROVEMENTS
20+00 TO 25+00
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=4'

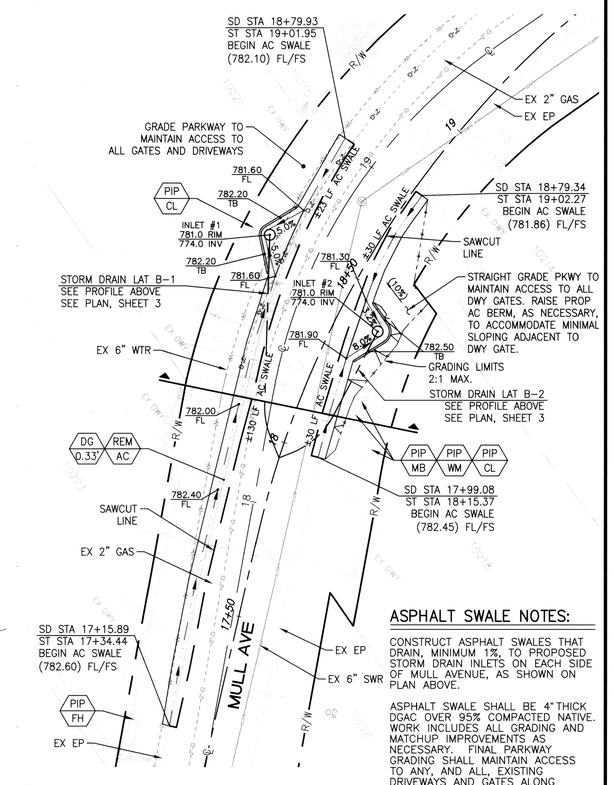
DESIGN WORK ORDER. NO.: 1917073
CONSTR. WORK ORDER. NO.: 1917074

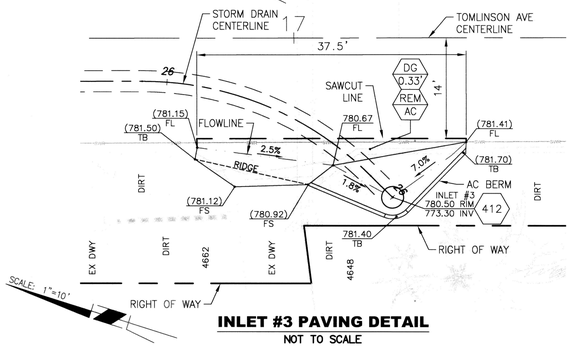
D-906

SHEET 04 OF 05

FILE NAME: D906-04.DWG



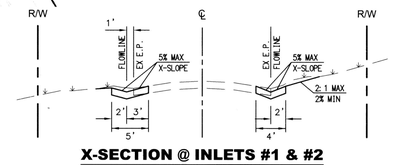




INLET #3 PAVING DETAIL
NOT TO SCALE

CURVE/LINE TABLE				
#	DELTA/BEARING	RADIUS	LENGTH	TANGENT
1	45°00'00"	45.00'	35.34'	18.64'
2	S27°23'22"W	--	2.18'	--

20 10 0 20 40 60
SCALE



X-SECTION @ INLETS #1 & #2
MULL AVENUE
NOT TO SCALE

STORM DRAIN STRUCTURE DATA TABLE																		
STRC. NO.	DWG. NO.	MAIN LINE STA.	LATERAL LEFT			LATERAL RIGHT			D1	D2	H	E'	F	T	L	L'	ELEV. R	ELEV. S
			ANGLE	B	C'	ANGLE	B	C'										
MH A1	432	10+18.48	53°25'28"	24"	5.42'	76°31'07"	24"	3.2'	30"	30"	-	4.1'	6"	5.25"	-	6.2'	SEE PROF.	741.76

ASPHALT SWALE NOTES:

CONSTRUCT ASPHALT SWALES THAT DRAIN, MINIMUM 1%, TO PROPOSED STORM DRAIN INLETS ON EACH SIDE OF MULL AVENUE, AS SHOWN ON PLAN ABOVE.

ASPHALT SWALE SHALL BE 4" THICK DGAC OVER 95% COMPACTED NATIVE. WORK INCLUDES ALL GRADING AND MATCHUP IMPROVEMENTS AS NECESSARY. FINAL PARKWAY GRADING SHALL MAINTAIN ACCESS TO ANY, AND ALL, EXISTING DRIVEWAYS AND GATES ALONG PROJECT LIMITS.

AS Built 5/02/23 B.O

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CITY OF RIVERSIDE

ENGINEER IN RESPONSIBLE CHARGE
Edward Lara
Edward Lara
R.C.E. No. 63753 EXPIRES: 9-30-20
DATE October 15, 2019

REGISTERED PROFESSIONAL ENGINEER EDWARD LARA No. 63753 Exp. 9-30-20 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CN DRAWN BY CN CHECKED BY EL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER	FM	10/15/19
CONSTRUCTION ADMIN.	DC	10/17/19
TRAFFIC DIVISION	NM	10-10-19
SURVEY	CB	10/17/19
STREETS		

APPROVED BY CITY ENGINEER
DATE OCT. 21, 2019

STORM DRAIN IMPROVEMENTS
2018 - 2019 CDBG TOMLINSON STORM DRAIN IMPROVEMENTS
25+00 TO 26+41.80 AND LATERALS
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=4'

DESIGN WORK ORDER. NO.: 1917073
CONSTR. WORK ORDER. NO.: 1917074
D-906
SHEET 05 OF 05
FILE NAME: D906-05.DWG