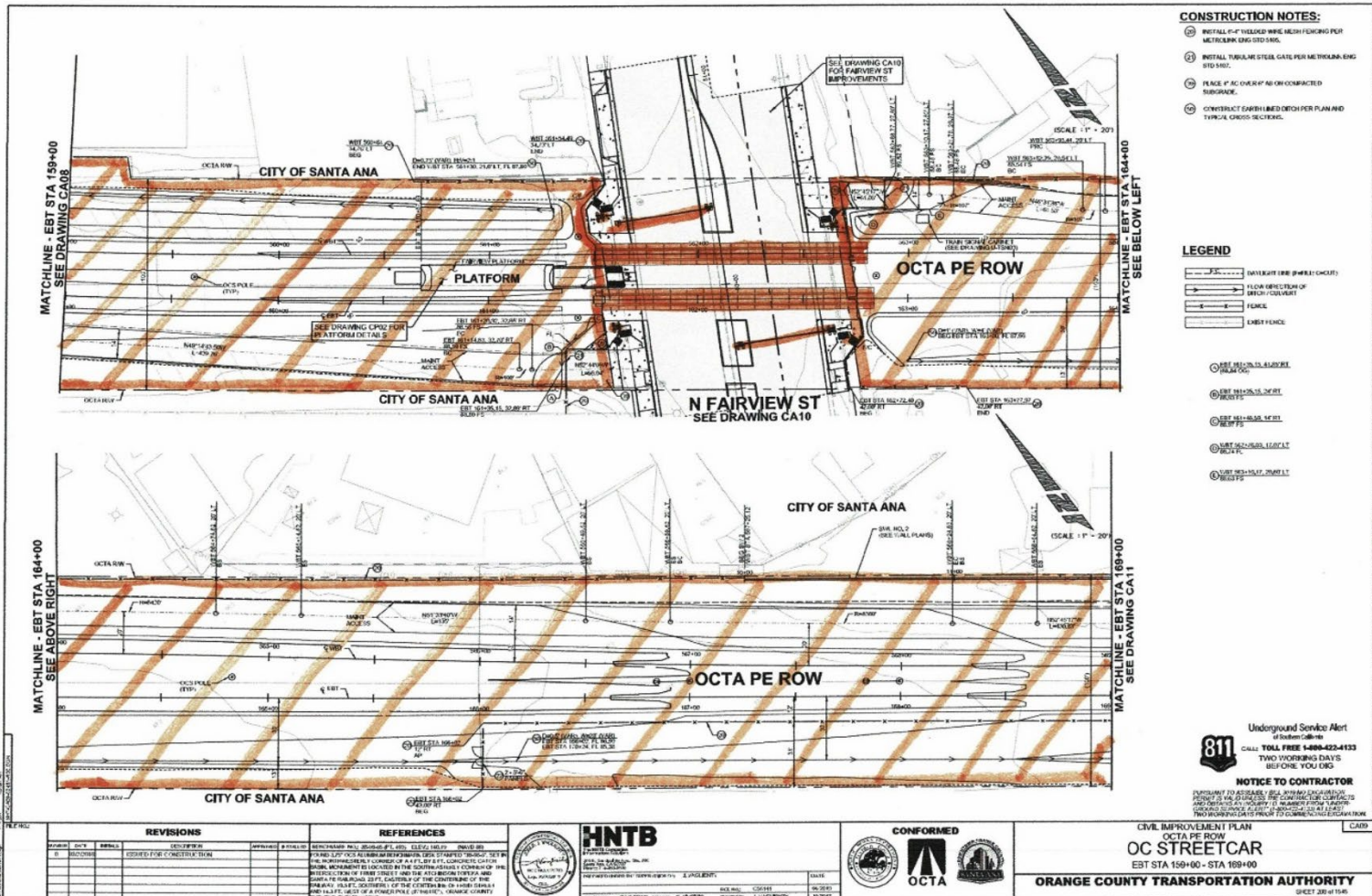


# SYSTEM MAP





- CONSTRUCTION NOTES:**
1. INSTALL 2" X 4" TREATED WIRE MESH FLOORING FOR METEORITE RESISTANCE.
  2. INSTALL TUBULAR STEEL GATE PER METEORITE RESISTANCE STD SPEC.
  3. PLACE 4" AC OVER 4" AS ON CONTRACTED SUBGRADE.
  4. CONTRACTOR SHALL FURNISH DETAIL PER PLAN AND TYPICAL CROSS SECTIONS.

- LEGEND**
- (Symbol) DRAINAGE DITCH (SHOULD CHECK)
  - (Symbol) DRAINAGE DIRECTION OF FLOW (CHECK)
  - (Symbol) FENCE
  - (Symbol) EXIST FENCE

- EXIST METEORITE RESISTANT CURB
- EXIST METEORITE RESISTANT SIDEWALK
- EXIST METEORITE RESISTANT DRIVEWAY
- EXIST METEORITE RESISTANT DRIVEWAY
- EXIST METEORITE RESISTANT DRIVEWAY

**811** Underground Service Alert  
 of Southern California  
 CALL TOLL FREE 1-888-824-1333  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND SERVICES IN ALL AREAS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND SERVICES IN ALL AREAS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND SERVICES IN ALL AREAS PRIOR TO CONSTRUCTION.

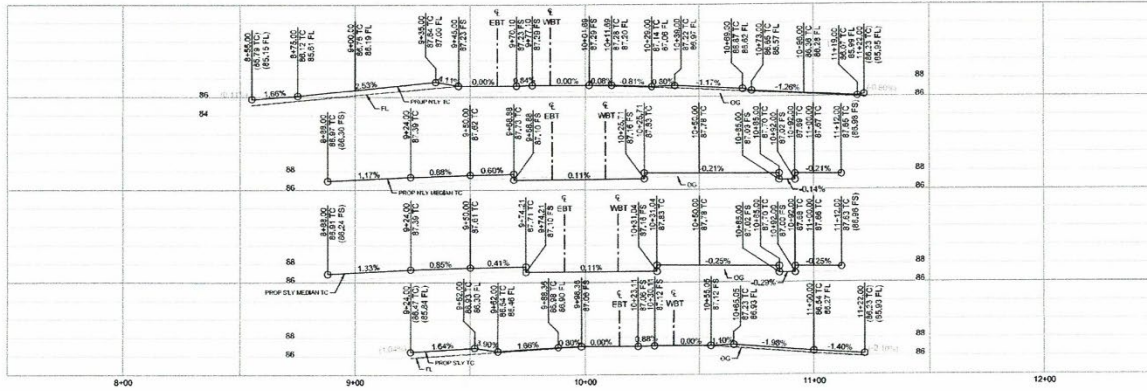
NO.	DATE	REVISIONS	APPROVED	BY	REFERENCES
1		ISSUED FOR CONSTRUCTION			

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 100  
 DENVER, CO 80202  
 TEL: 303.733.4400  
 FAX: 303.733.4401  
 WWW.HNTB.COM

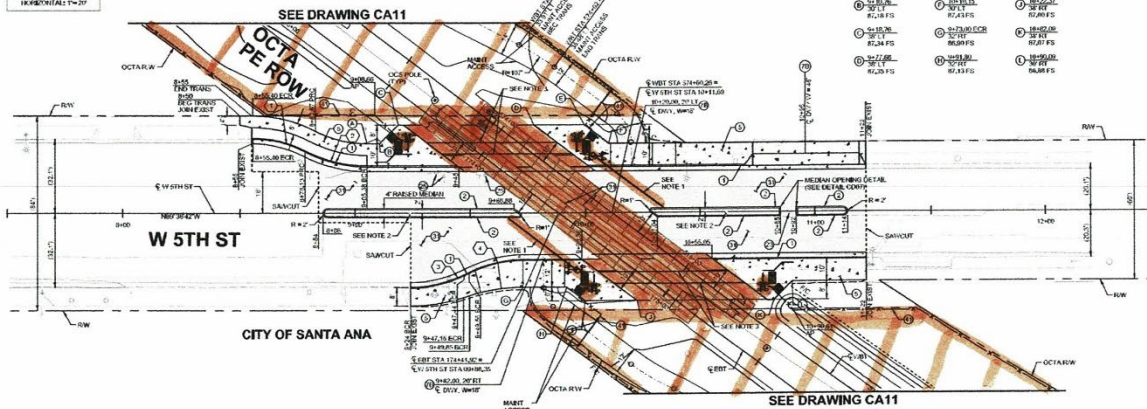
**CONFORMED**

**CIVIL IMPROVEMENT PLAN**  
**OC STREETCAR**  
 EST STA 159+00 - STA 169+00  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 208 OF 1048

CITY OF SANTA ANA PROJECT NO. 17-5766-CI: OC STREETCAR FROM HARBOR BLVD TO SARTY



PROFILE SCALE:  
VERTICAL: 1" = 4'  
HORIZONTAL: 1" = 20'



**CONSTRUCTION NOTES:**

1. CONSTRUCT TYPE 2.54 CURB & GUTTER PER C.S.A. STD PLAN NO. 1101 UNLESS OTHERWISE SHOWN. MATCH HORIZ AND VERT ALIGNMENT OF EX.FL AND TC.
2. CONSTRUCT TYPE 3 CURB PER C.S.A. STD PLAN NO. 1101.
3. REFER TO PER DETAIL ON DRAWING C607.
4. CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 1101.
5. CONSTRUCT 4" THICK PCC DRIVEWAY APPROACH CASE 1 PER C.S.A. STD PLAN NO. 1101.
6. ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
7. ADJUST VALVE FRAME AND COVER TO FINISHED GRADE.
8. PLACE 2" ASPH OVER 2" AC OVER 6" SL.
9. INSTALL 4' HIGH WELDED WIRE MESH FENCE WITH SMOOTH SURFACE AT TOP PER METRO BULKING STD PLAN NO. 305.

CURVE NO.	R	Δ	T	L
1	50'	27°02'00"	12.02'	23.59'
2	60'	27°00'44"	14.41'	28.29'
3	55'	25°17'00"	12.34'	24.27'
4	55'	25°17'00"	12.34'	24.27'

**LEGEND**

- CENTERLINE (H=HILL, C=CHOUT)
- AC PAVEMENT
- PCC

**NOTES:**

1. FOR APPROXIMATE GRADE CROSSING EQUIPMENT INFORMATION, SEE CONCRETE.
2. FOR LANDSCAPING, SEE LANDSCAPE PLANS.
3. FOR INSTALLATION OF UTILITY STRUCTS, SEE CHANNEL COVER PLAN DRAWING C607.

Underground Service Alert  
of Southern California  
**811** CALL TOLL FREE 1-800-452-4133  
TWO WORKING DAYS  
BEFORE YOU DIG

**NOTICE TO CONTRACTOR**

PERMIT TO ADDRESS THE CONTRACTOR'S OBLIGATIONS AND RESPONSIBILITIES TO THE COMMUNITY AND TO THE PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND SERVICE ALERTS IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND ORDINANCES.

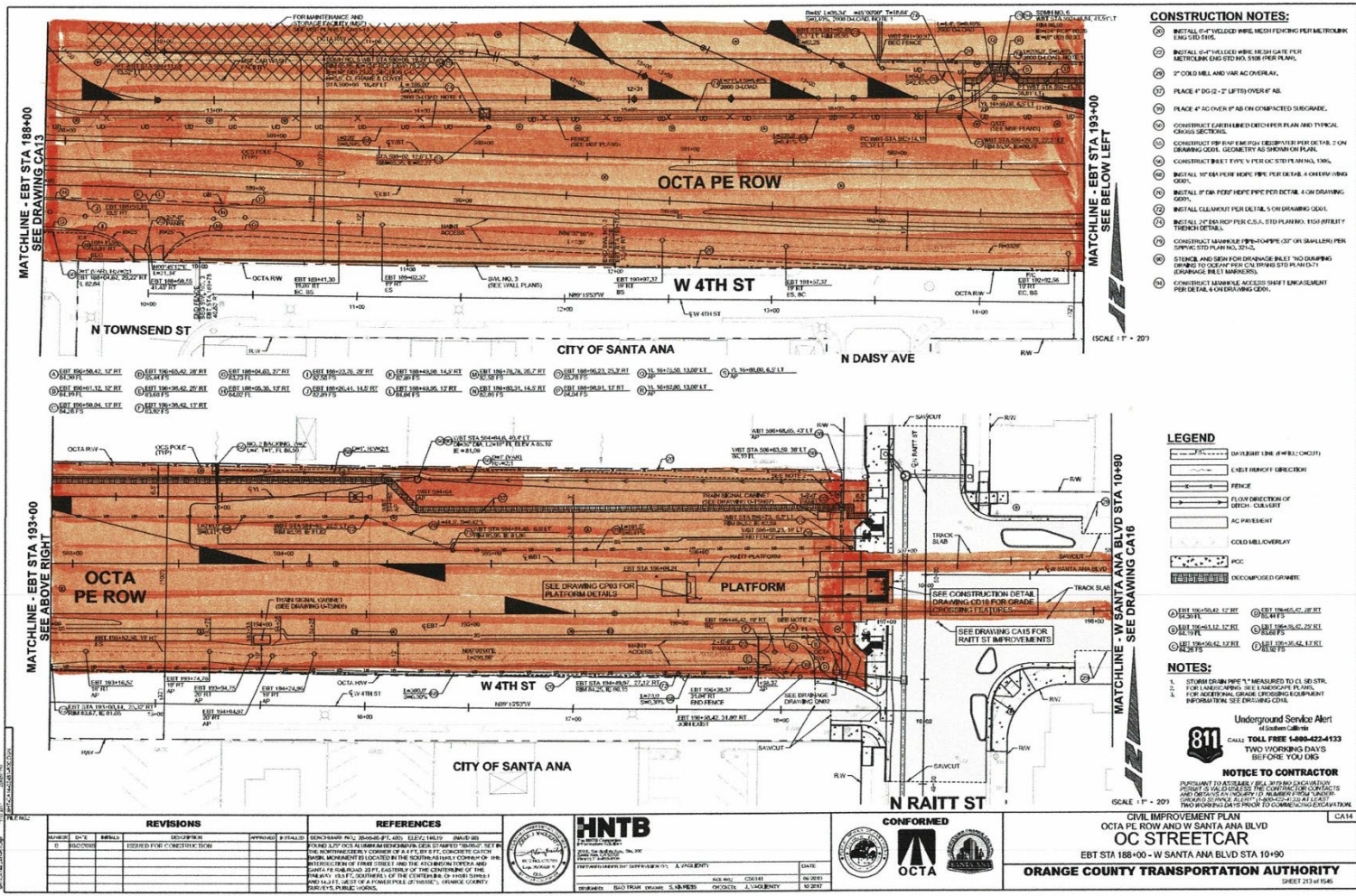
NO.	DATE	REVISIONS
1	08/11/2011	ISSUED FOR CONSTRUCTION

**HNTB**  
HNTB CONSULTANTS, INC.  
1000 WEST 10TH AVENUE, SUITE 1000  
DENVER, CO 80202  
TEL: 303.733.1000  
WWW.HNTB.COM

**CONFORMED**  
**OCTA**  
ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN AND PROFILE  
**OC STREETCAR**  
5TH ST  
5TH ST STA 8+55 - STA 11+22  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
SHEET 211 OF 215

CITY OF SANTA ANA PROJECT NO. 11-8765-C1 OC STREETCAR FROM HARBOR BLVD TO SARTY



- CONSTRUCTION NOTES:**
- 1. INSTALL 2" P-FELLED WIRE MESH GATE PER METROLOG END STD NO. 5106 PER PLAN.
  - 2. INSTALL 2" P-FELLED WIRE MESH GATE PER METROLOG END STD NO. 5106 PER PLAN.
  - 3. 2" COOL MLL AND VAR AC OVERLAY.
  - 4. PLACE 4" DG 2 - 2" LIFTS OVER 4" AB.
  - 5. PLACE 4" AC OVER 4" AB ON CONTRACTED SUBGRADE.
  - 6. CONTRACT CARBON FIBER REINFORCED FIBER OCTA PE ROW AND TYPICAL CROSS SECTIONS.
  - 7. CONTRACT 2" BIPOLAR C.S.A. STD PLAN NO. 1150 (FIRST) TRACK DETAIL.
  - 8. CONTRACT BUILT UP FIVE 1/2" PER OCTA PE ROW PLAN.
  - 9. INSTALL 10' DIA. PER FOR PER DETAIL 4 ON DRAWING.
  - 10. INSTALL 10' DIA. PER FOR PER DETAIL 4 ON DRAWING.
  - 11. INSTALL CLEARANCE PER DETAIL 4 ON DRAWING.
  - 12. INSTALL 2" BIPOLAR C.S.A. STD PLAN NO. 1150 (FIRST) TRACK DETAIL.
  - 13. CONTRACT 2" BIPOLAR C.S.A. STD PLAN NO. 1150 (FIRST) TRACK DETAIL.
  - 14. STAKE AND SIGN FOR SPAN BUILT TO DRAWING DRAWING TO CLEAR PER C.A. DRAWING STD PLAN 1150 (FIRST) TRACK DETAIL.
  - 15. CONTRACT 2" BIPOLAR C.S.A. STD PLAN NO. 1150 (FIRST) TRACK DETAIL.

- LEGEND**
- 1. OVERLAP LINE (IF BUILT ON SITE)
  - 2. EXIST FLOW DIRECTION
  - 3. FENCE
  - 4. FLOW DIRECTION OF BENCH CONVEYER
  - 5. AC PAVEMENT
  - 6. COOL MELLOVERLAY
  - 7. JOC
  - 8. DECOMPOSED GRANITE

- NOTES:**
1. STATION DIMENSIONS ARE MEASURED TO CL OF STR.
  2. FOR LAYOUTING, SEE LAYOUTING PLAN.
  3. FOR ADDITIONAL GRADING, LAYOUTING EQUIPMENT INFORMATION, SEE DRAWING C.A. 13.
- Underground Service Alert**  
 811 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS BEFORE YOU DIG
- NOTICE TO CONTRACTOR**  
 CONTRACTOR TO VERIFY ALL UTILITIES AND LAYOUTING INFORMATION PRIOR TO CONSTRUCTION. CONTRACTOR TO VERIFY ALL UTILITIES AND LAYOUTING INFORMATION PRIOR TO CONSTRUCTION.

NO.	DATE	REVISIONS
1	08/08/2018	ISSUED FOR CONSTRUCTION

NO.	DATE	REFERENCE
1	08/08/2018	CONTRACT NO. 17-5766-C1

**HNTB**  
 HNTB CONSULTANTS  
 1000 WEST 10TH AVENUE  
 SUITE 1000  
 DENVER, CO 80202  
 TEL: 303.733.1000  
 FAX: 303.733.1001  
 WWW.HNTB.COM

**CONFORMED**

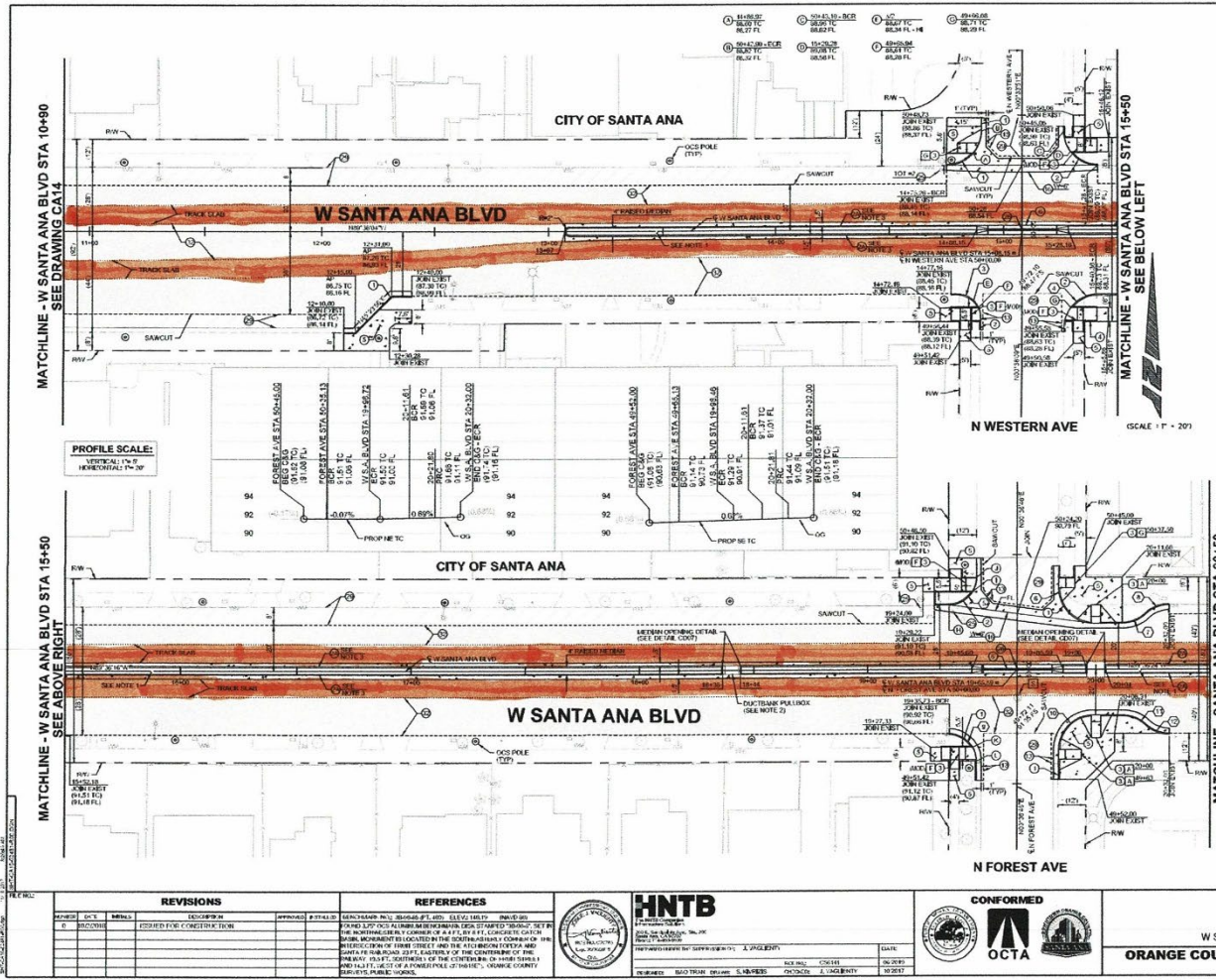
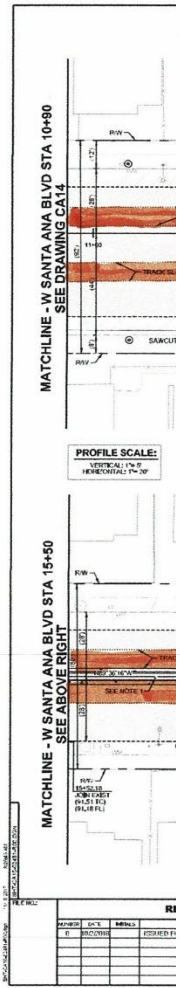
**OCTA**

DATE: 08/08/2018	DESIGNER: J. J. JENSEN	CHECKER: J. J. JENSEN	SCALE: 1" = 20'
PROJECT: 17-5766-C1	PROJECT: 17-5766-C1	PROJECT: 17-5766-C1	PROJECT: 17-5766-C1

**CIVIL IMPROVEMENT PLAN**  
**OCTA PE ROW AND W SANTA ANA BLVD**  
**OC STREETCAR**  
 EBT STA 188+00 - W SANTA ANA BLVD STA 10+90

**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 213 OF 240

CITY OF SANTA ANA PROJECT NO. 17-5766-C1, OC STREETCAR FROM HARBOR BLVD TO SARTO



**CONSTRUCTION NOTES:**

- CONSTRUCT TYPE 2.5M CURB & GUTTER PER C.S.A. STD. PLAN NO. 101. UNLESS OTHERWISE SHOWN, WATER HOSE AND VERT. ALIGNMENT OF E.F. AND T.C.
- CONSTRUCT TYPE 1.5M CURB PER C.S.A. STD. PLAN NO. 101. UNLESS OTHERWISE SHOWN, WATER HOSE AND VERT. ALIGNMENT OF E.F. AND T.C.
- CONSTRUCT 4" THICK CONC. SIDEWALK PER C.S.A. STD. PLAN NO. 101. UNLESS OTHERWISE SHOWN, WATER HOSE AND VERT. ALIGNMENT OF E.F. AND T.C.
- CONSTRUCT 12" DEEP AC ON COMPACTED SUBGRADE.
- CONSTRUCT CROSS GUTTER PER C.S.A. STD. PLAN NO. 101.
- ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
- FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD. PLAN NO. 111.
- 2" COLD HALL AND W.A.R.C. OVERLAY.
- PLACE 2" ARMA OVER 2" AC OVER 12" SB.

**DISPOSITION NOTES:**

- PROTECT BY IN PLACE
- REMOVE BY OTHERS
- RELOCATED BY THIRD PARTY
- SEE WATER, SEWER, DRAINAGE, UTILITY

CURVE NO.	R	A	T	L
1	15'	89°50'00"	14.56'	23.87'
2	15'	90°09'50"	15.04'	23.61'
3	10'	90°12'13"	10.04'	15.24'
4	15'	89°23'50"	14.84'	22.62'
5	12'	89°40'58"	11.59'	18.80'
6	15'	90°13'09"	15.06'	23.62'
7	15'	42°50'00"	5.88'	11.21'
8	15'	42°50'00"	5.88'	11.21'
9	12'	88°48'22"	11.79'	18.60'
10	15'	89°40'51"	14.54'	23.51'
11	15'	42°50'00"	5.88'	11.21'
12	15'	42°50'00"	5.88'	11.21'

**LEGEND**

- AC PAVEMENT
- COLD HALL OVERLAY
- PCC

**NOTES:**

- FOR LANDSCAPING, SEE LANDSCAPE PLANS.
- FOR DRAINAGE, SEE DRAINAGE PLANS.
- TOP OF CURB ELEVATIONS CONTROLLED BY BENCHMARK. SEE DETAIL AND TYPICAL SECTION DRAWINGS FOR DETAILS.

**811** Underground Service Alert  
CALL TOLL FREE 1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
PURSUANT TO ORDINANCE 15.01, ANY AND ALL CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE COUNTY OF ORANGE PRIOR TO COMMENCING ANY CONSTRUCTION WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE COUNTY OF ORANGE PRIOR TO COMMENCING ANY CONSTRUCTION WORK.

**CIVIL IMPROVEMENT PLAN**  
W SANTA ANA BLVD  
OC STREETCAR  
W SANTA ANA BLVD STA 10+00 - STA 20+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
SHEET 215 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-8766-C: OC STREETCAR FROM HARBOR BLVD TO BARTC

REVISED	DATE	REVISION	BY	CHKD

REVISED	DATE	REVISION	BY	CHKD

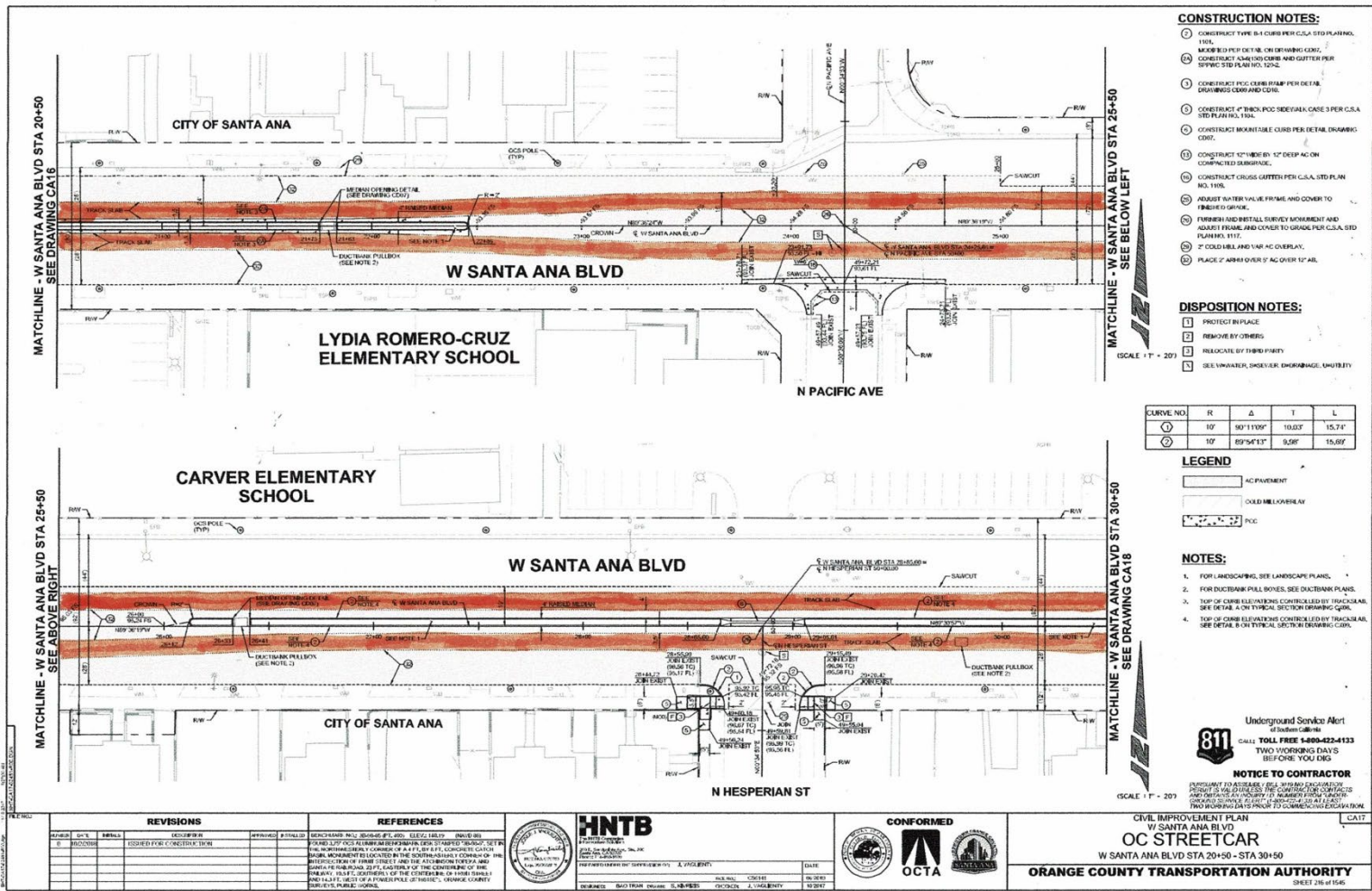
REVISED	DATE	REVISION	BY	CHKD

REVISED	DATE	REVISION	BY	CHKD

**HNTB**  
HNTB CONSULTANTS, INC.  
1000 WEST 10TH AVENUE, SUITE 1000  
DENVER, COLORADO 80202  
TEL: 303.733.8000 FAX: 303.733.8001  
WWW.HNTB.COM

**CONFORMED**  
OCTA  
ORANGE COUNTY TRANSPORTATION AUTHORITY

**DATE:** 10/26/2017  
**SCALE:** 1" = 40'



- CONSTRUCTION NOTES:**
1. CONSTRUCT TYPE B-1 CURB PER C.S.A. STD PLAN NO. 1105.
  2. MINOR BLDG DETAIL ON EXISTING CURB; CONSTRUCT SANDY CURB AND GUTTER PER SPPWC STD PLAN NO. 1202.
  3. CONSTRUCT PCC CURB RAMP PER DETAIL DRAWINGS C004 AND C005.
  4. CONSTRUCT 4" BOLD PCC SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 1106.
  5. CONSTRUCT INDESTRUCTIBLE CURB PER DETAIL DRAWING C007.
  6. CONSTRUCT 12" DEEP BY 12" DEEP AC ON COMPACTED SUBGRADE.
  7. CONSTRUCT CROSS GUTTER PER C.S.A. STD PLAN NO. 1105.
  8. ADJUST GUTTER VALVE FRAME AND COVER TO FINISHED GRADE.
  9. FINISH GUTTER WITH SURVEY BENCHMARK AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD PLAN NO. 1112.
  10. 2" COOL MILL AND 1/4" AC OVERLAY.
  11. PLACE 2" AREA OVER 9' AC OVER 12" AB.

- DISPOSITION NOTES:**
1. PROTECT IN PLACE
  2. REMOVE BY OTHERS
  3. RELOCATE BY THIRD PARTY
  4. DELIVER WATER, SEWER, DRAINAGE, UTILITY

CURVE NO.	R	Δ	T	L
1	10'	90°11'10"	10.63'	15.71'
2	10'	89°54'13"	9.58'	16.69'

- LEGEND**
- AC PAVEMENT
  - COOL MILL OVERLAY
  - PCC

- NOTES:**
1. FOR LANDSCAPING, SEE LANDSCAPE PLANS.
  2. FOR DUCTBANK PULL BOXES, SEE DUCTBANK PLANS.
  3. TOP OF CURB ELEVATIONS CONTROLLED BY TRACKS/RAIL. SEE DETAIL 8 ON TYPICAL SECTION DRAWING C004.
  4. TOP OF CURB ELEVATIONS CONTROLLED BY TRACKS/RAIL. SEE DETAIL 8 ON TYPICAL SECTION DRAWING C004.

Underground Service Alert  
of Southern California  
**811** CALL TOLL FREE 1-800-422-4133  
TWO WORKING DAYS  
BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
PROTECT EXISTING UTILITIES. SEE ANY EXISTING UTILITIES AND RECORD DRAWINGS FOR THE EXISTING UTILITIES. VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES. VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES. VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES.

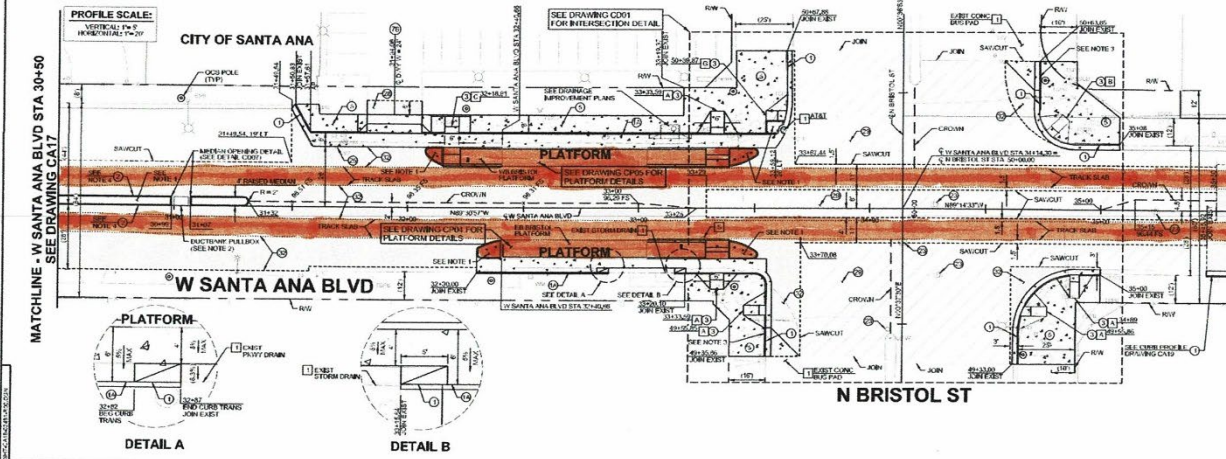
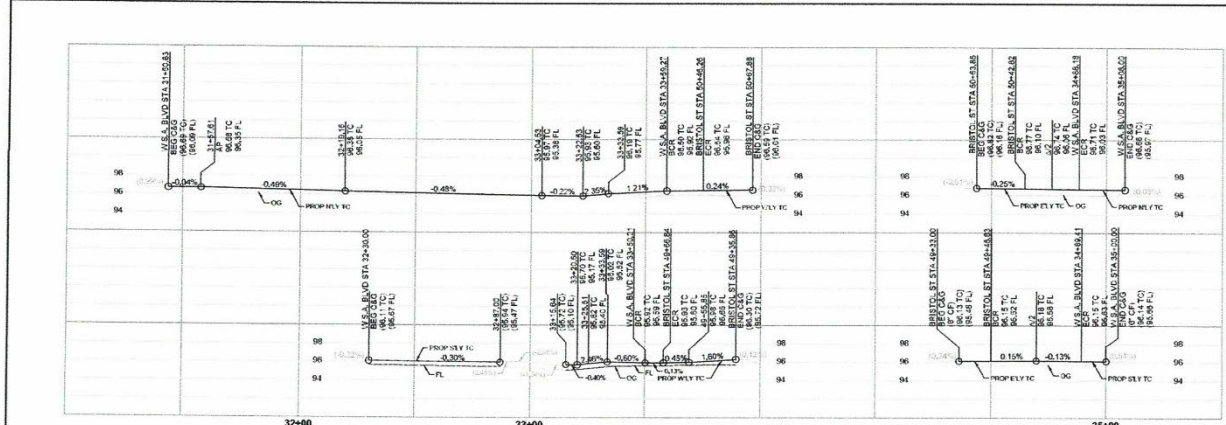
REVISIONS		REFERENCES	
NO.	DATE	DESCRIPTION	BY
1	01/15/2017	ISSUED FOR CONSTRUCTION	...

**HNTB**  
HNTB CONSULTANTS, INC.  
1000 RIVER STREET, SUITE 200  
SAN ANTONIO, TEXAS 78204  
TEL: 214-343-7000  
WWW.HNTB.COM

**CONFORMED**  
OCTA  
ORANGE COUNTY TRANSPORTATION AUTHORITY

**CIVIL IMPROVEMENT PLAN**  
W SANTA ANA BLVD  
OC STREETCAR  
W SANTA ANA BLVD STA 20+50 - STA 30+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
SHEET 216 OF 256

CITY OF SANTA ANA PROJECT NO. 17-5765-CJ OC STREETCAR FROM HARBOR BLVD TO SARTY



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE 1.5M CURB AFTER PER C.S.A. STD PLAN NO. 118-118.25 (SEE PLAN) FOR ALL LOCATIONS AND VERTICAL ALIGNMENT OF C.V. AND V.T.C.
  - CONSTRUCT TYPE 2.5M (8'00") MONOLITHIC CURB AND EXTENDED GUTTER PER CONSTRUCTION DETAIL DRAWING C007.
  - CONSTRUCT TYPE 1.5M CURB PER C.S.A. STD PLAN NO. 118.1, MODIFIED PER DETAIL OF DRAWING C007.
  - CONSTRUCT PCC CURB RAMP PER DETAIL DRAWING C008 AND 009.
  - CONSTRUCT 12" THICK PCC ONE-WAY APPROACH CASE 3 PER C.S.A. STD PLAN NO. 111.2.
  - ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  - PLACE 4" AC OVER 12" M.S.
  - 2" COOL MILL AND 1/2" AC OVERLAY.
  - PLACE 2" ASPHALT OVER 2" AC OVER 12" M.S.

- DISPOSITION NOTES:**
- PROTECT IN PLACE
  - REMOVE BY OTHERS
  - RELOCATE BY THIRD PARTY
  - WHALETER, SHEARER, DITCHING, UTILITY

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC

- NOTES:**
- FOR LAYOUTS, SEE LINES AND PLANS.
  - FOR EXISTING UTILITIES, SEE EXISTING PLANS.
  - CONSTRUCT 12" PCC ONE-WAY APPROACH MONOLITHIC CURB PER C.S.A. STD PLAN NO. 118.1 (SEE DRAWING PLAN).
  - REPLACE ALL MANHOLES 12" LONG, 24" DIA.
  - REFER CURB ELEVATIONS CONTROLLED BY PROFILES. SEE DETAIL B ON TYPICAL SECTION DRAWING C008.

Underground Service Alert  
 811  
 CALL TOLL FREE 1-800-452-4133  
 TWO BUSINESS DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PERMIT TO CONSTRUCT IS THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES INVOLVED IN THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES INVOLVED IN THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES INVOLVED IN THE PROJECT.

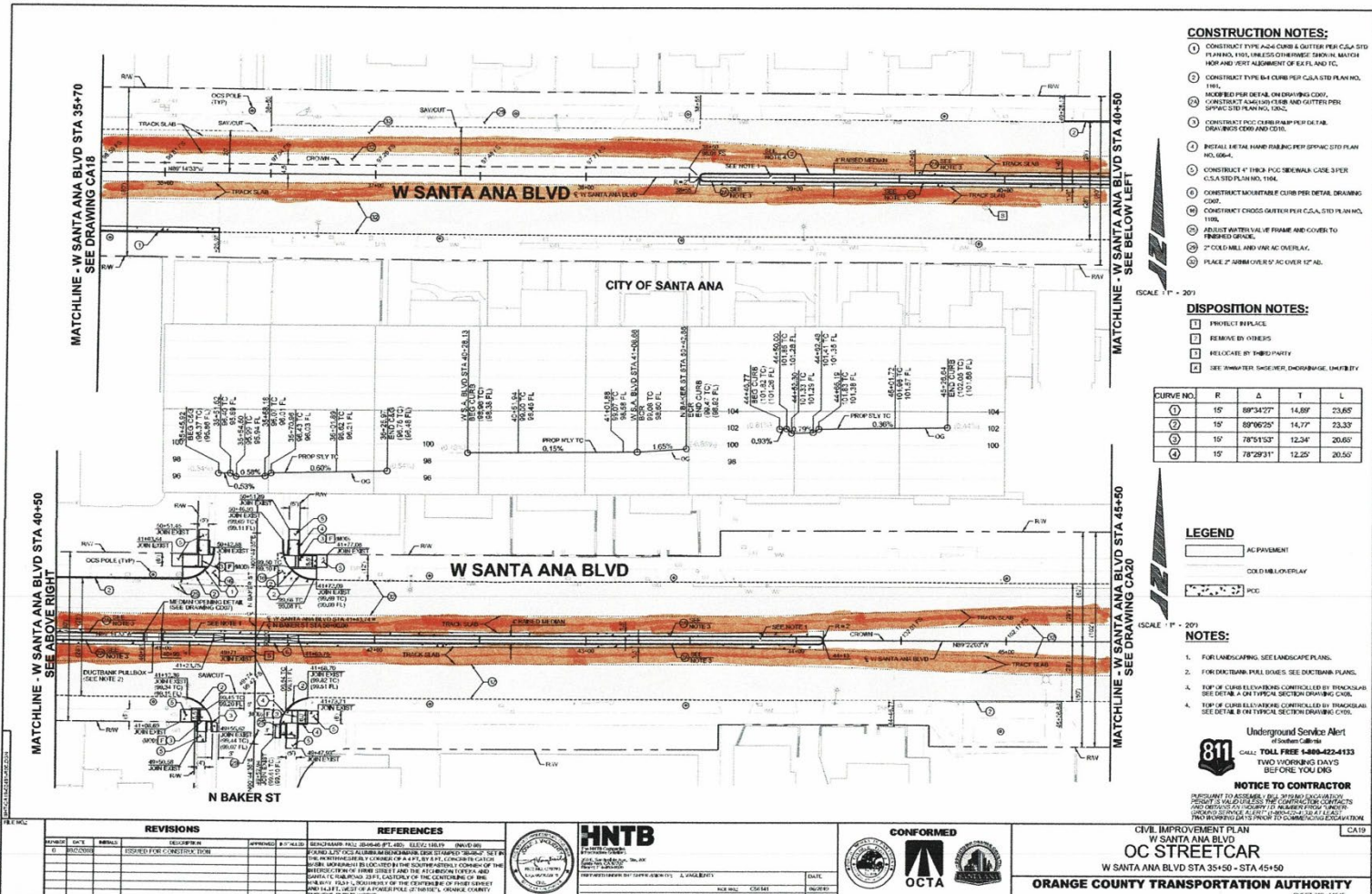
REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1		ISSUED FOR CONSTRUCTION			

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 100  
 DENVER, COLORADO 80202  
 PHONE: 303.733.1000  
 FAX: 303.733.1001  
 WWW.HNTB.COM

**CONFIRMED**  
 OCTA  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN AND PROFILE  
 W SANTA ANA BLVD  
**OC STREETCAR**  
 W SANTA ANA BLVD STA 30+50 - STA 35+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 217 OF 249

CITY OF SANTA ANA PROJECT NO. 17-8766-CJ OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
1. CONSTRUCT TYPE A24 CURB & GUTTER PER C.S.A. STD. PLAN NO. 1104, UNLESS OTHERWISE SHOWN IN MATCH AND EXIST ALIGNMENT OF EX. PLAN NO. 1104.
  2. CONSTRUCT TYPE B4 CURB PER C.S.A. STD. PLAN NO. 1104.
  3. REFER TO DETAIL ON DRAWING COIL.
  4. CONSTRUCT 4" MIN. CONC. CURB PER C.S.A. STD. PLAN NO. 1104, UNLESS OTHERWISE SHOWN IN MATCH AND EXIST ALIGNMENT OF EX. PLAN NO. 1104.
  5. CONSTRUCT 2" CONC. CURB PER C.S.A. STD. PLAN NO. 1104, UNLESS OTHERWISE SHOWN IN MATCH AND EXIST ALIGNMENT OF EX. PLAN NO. 1104.
  6. CONSTRUCT 2" CONC. CURB PER C.S.A. STD. PLAN NO. 1104, UNLESS OTHERWISE SHOWN IN MATCH AND EXIST ALIGNMENT OF EX. PLAN NO. 1104.
  7. CONSTRUCT CROSS GUTTER PER C.S.A. STD. PLAN NO. 1104.
  8. ADJUST WATER VALVE FRAME AND COVER TO EXISTING GRADE.
  9. 2" COLD MILL AND FINE AC OVERLAY.
  10. PLACE 2" ASPH. OVER 5' AC OVER 12" AB.

- DISPOSITION NOTES:**
1. PROTECT IN PLACE
  2. REMOVE BY OTHERS
  3. RELOCATE BY THIRD PARTY
  4. SEE ANNOTATED SHEET FOR DIMENSIONALITY

CURVE NO.	R	Δ	T	L
1	15'	89°34'27"	14.89'	23.65'
2	15'	89°06'25"	14.77'	23.33'
3	15'	78°51'53"	12.34'	20.65'
4	15'	78°29'31"	12.25'	20.50'

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC

- NOTES:**
1. FOR LANDSCAPING, SEE LANDSCAPE PLANS.
  2. FOR DUCT BANK PULL BOXES, SEE DUCT BANK PLANS.
  3. TOP OF CURB ELEVATIONS CONTROLLED BY TRACKS AND SEE DETAIL B ON TYPICAL SECTION DRAWING C705.
  4. TOP OF CURB ELEVATIONS CONTROLLED BY TRACKS AND SEE DETAIL B ON TYPICAL SECTION DRAWING C705.
- Underground Service Alert  
 811  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DRAWING. VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DRAWING. VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DRAWING. VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DRAWING.

**CIVIL IMPROVEMENT PLAN**  
 W SANTA ANA BLVD  
**OC STREETCAR**  
 W SANTA ANA BLVD STA 35+50 - STA 45+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**

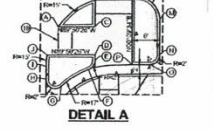
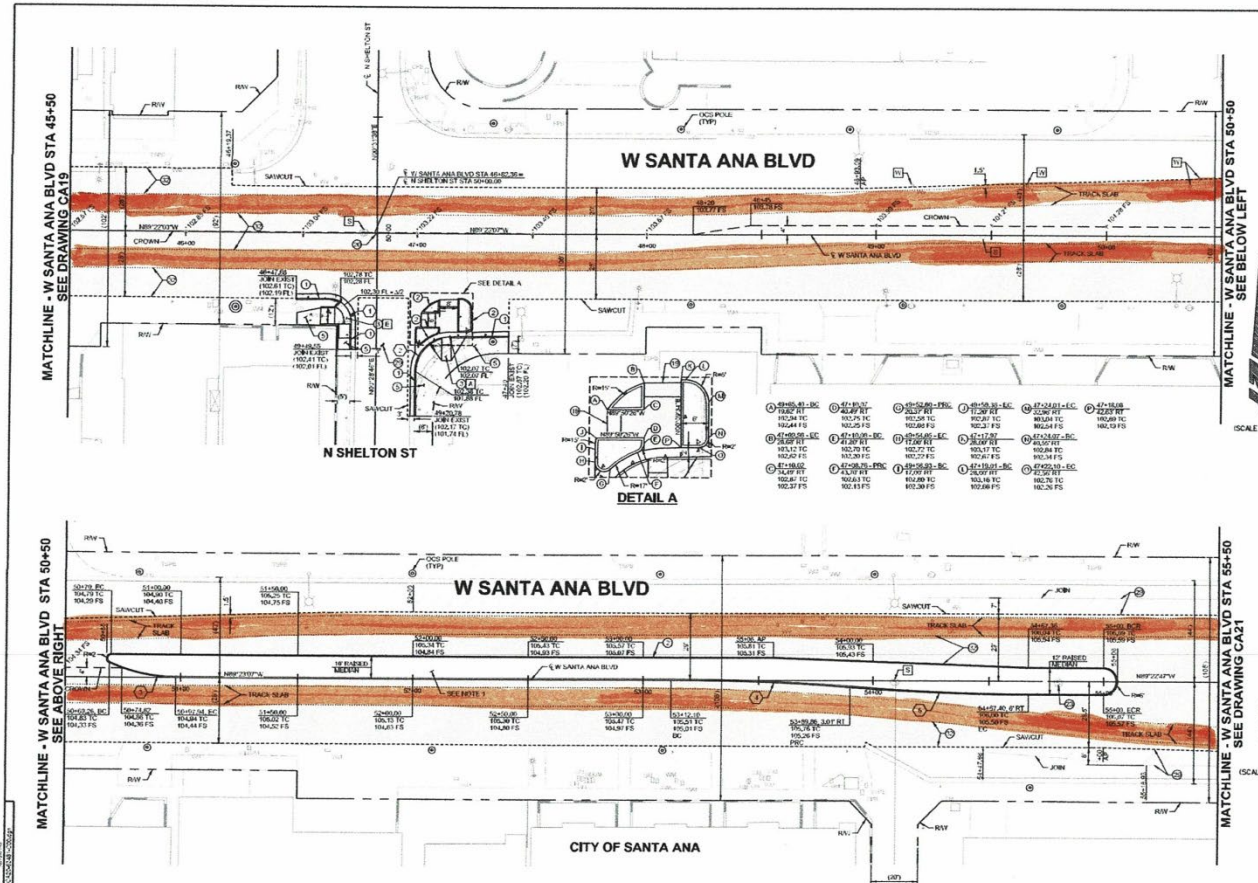
REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1		ISSUED FOR CONSTRUCTION			

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 EAST 17TH AVENUE, SUITE 200  
 DENVER, COLORADO 80202  
 PHONE: 303.733.4000 FAX: 303.733.4001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CITY OF SANTA ANA PROJECT NO. 17-8786-C; OC STREETCAR FROM HARBOR BLVD TO SARTO





- CONSTRUCTION NOTES:**
1. CONSTRUCT TYPE 1 AND CURB & GUTTER PER C.S.A. STD PLAN NO. 1104 UNLESS OTHERWISE SHOWN. MATCH FOR AND VERIFY ALIGNMENT OF EXISTING AND NEW.
  2. CONSTRUCT TYPE 5-4 CURB PER C.S.A. STD PLAN NO. 1104.
  3. LOCATED FOR DETAIL ON DRAWING COPY.
  4. CONSTRUCT PCC CURB RAMP PER DETAIL DRAWINGS UNLESS OTHERWISE SHOWN.
  5. INSTALL METAL HAND RAILING PER SPECIFIC STD PLAN NO. 1104.
  6. CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 1104.
  7. INSTALL DETECTABLE WARNING SURFACE PER DRAWING PER SPECIFIC STD PLAN NO. 1104.
  8. ADJUST UTILITY FRAME AND COVER TO FINISHED GRADE.
  9. FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD PLAN NO. 1104.
  10. 2" COLD MILL AND VARIAC OVERLAY.
  11. PLACE 2" ASPHALT OVER IF AC OVER 12" TH.

- DISPOSITION NOTES:**
1. PROTECT IN PLACE
  2. REMOVE BY OTHERS
  3. RELOCATE BY THIRD PARTY
  4. SEE VERTICAL ALIGNMENT DRAWING FOR UTILITY

SCALE: 1" = 20'

CURVE NO.	R	Δ	T	L
1	157	90°00'00"	10.00'	15.71'
2	15	90°11'55"	15.05'	23.61'
3	70	24°11'17"	15.00'	26.55'
4	1000'	04°25'53"	38.50'	77.86'
5	1000'	04°25'13"	38.62'	77.61'



**NOTES:**

1. FOR LANSKOVIC, SEE LANDSCAPE PLAN.

SCALE: 1" = 20'

Underground Service Alert  
 811  
 CALL TOLL FREE 1-800-824-1133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 CONTRACTOR TO VERIFY ALL UTILITIES AND LOCATIONS PRIOR TO CONSTRUCTION. VERIFY ALL UTILITIES AND LOCATIONS PRIOR TO CONSTRUCTION. VERIFY ALL UTILITIES AND LOCATIONS PRIOR TO CONSTRUCTION. VERIFY ALL UTILITIES AND LOCATIONS PRIOR TO CONSTRUCTION.

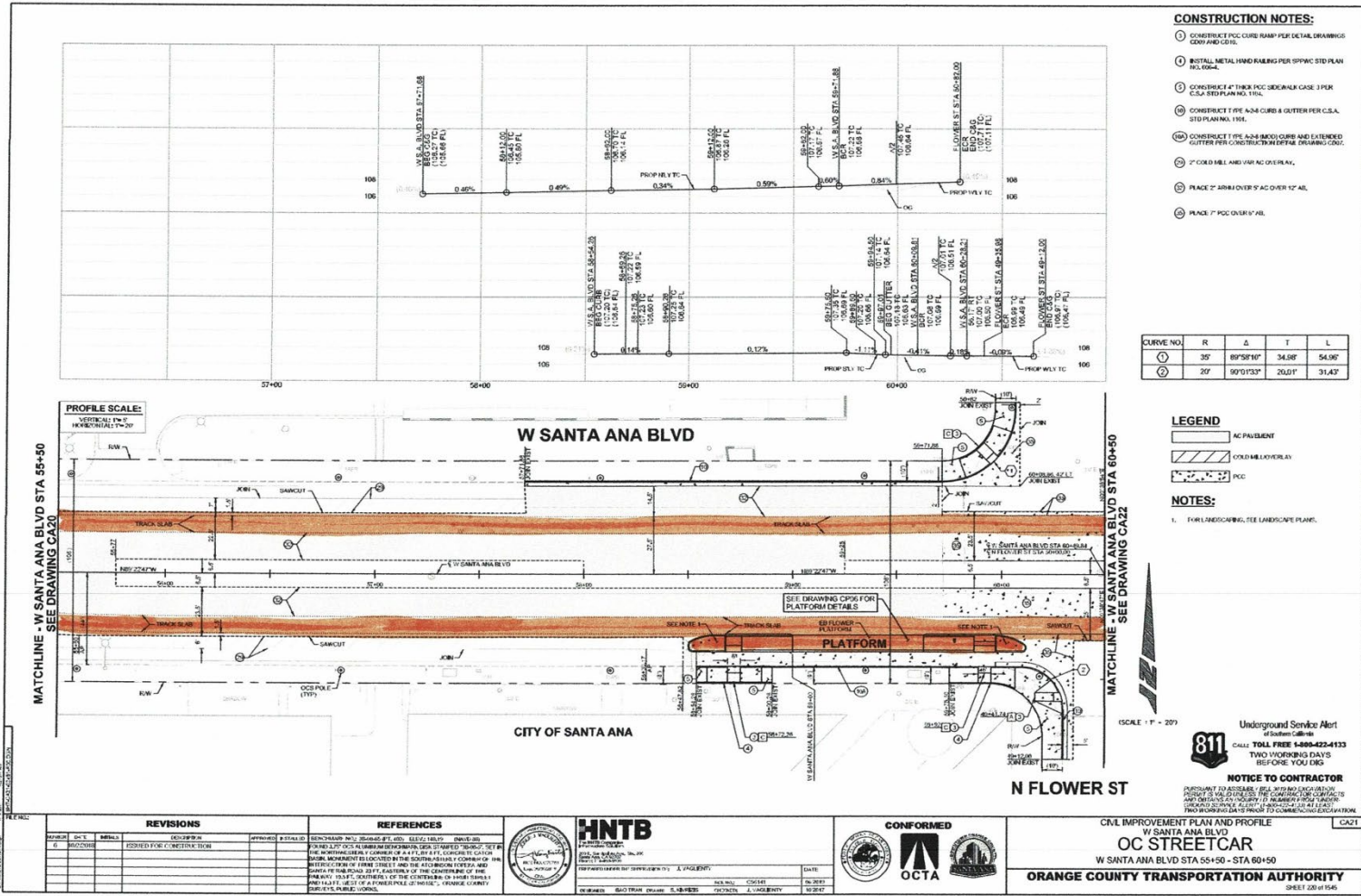
REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 200  
 DENVER, COLORADO 80202  
 PHONE: (303) 733-4000  
 FAX: (303) 733-4001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

**CIVIL IMPROVEMENT PLAN**  
 W SANTA ANA BLVD  
 OC STREETCAR  
 W SANTA ANA BLVD STA 45+50 - STA 55+50  
 ORANGE COUNTY TRANSPORTATION AUTHORITY  
 SHEET 209 OF 245

CITY OF SANTA ANA PROJECT NO. 17-8768-GJ OC STREETCAR FROM HARBOR BLVD TO SARTY



- CONSTRUCTION NOTES:**
- CONSTRUCT PCC CURB RAMP PER DETAIL DRAWINGS C001 AND C016.
  - INSTALL METAL HAND RAILING PER SPAC STD PLAN 103, 105-4.
  - CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD PLAN 110.
  - CONSTRUCT 1" (PE 4-24) CURB & GUTTER PER C.S.A. STD PLAN 116.
  - CONSTRUCT 1" (PE 4-24-8000) CURB AND EXTENDED GUTTER PER CONSTRUCTION DETAIL DRAWING C001.
  - 2" COLD MILL AND 4" AC OVERLAY.
  - PLACE 2" ASPH OVER 5" AC OVER 12" AB.
  - PLACE 2" PCC OVER 12" AB.

CURVE NO.	R	Δ	T	L
①	35'	89°59'19"	34.58'	54.90'
②	25'	90°13'32"	26.01'	31.43'

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC

- NOTES:**
- FOR LANDSCAPE, SEE LANDSCAPE PLAN.

Underground Service Alert  
 811 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PURSUANT TO ASSEMBLY BILL 680 AND CHAPTER 1030, SECTION 15140 OF THE PUBLIC WORKS CONTRACTING ACT, CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONDUCTING ALL NECESSARY PRELIMINARY INVESTIGATIONS PRIOR TO COMMENCING EXCAVATION.

NO.	DATE	BY	DESCRIPTION

**REFERENCES**

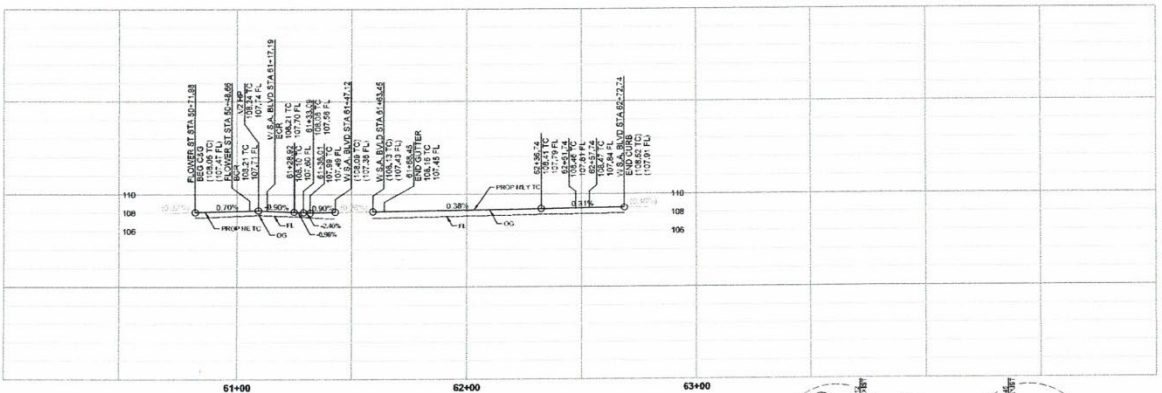
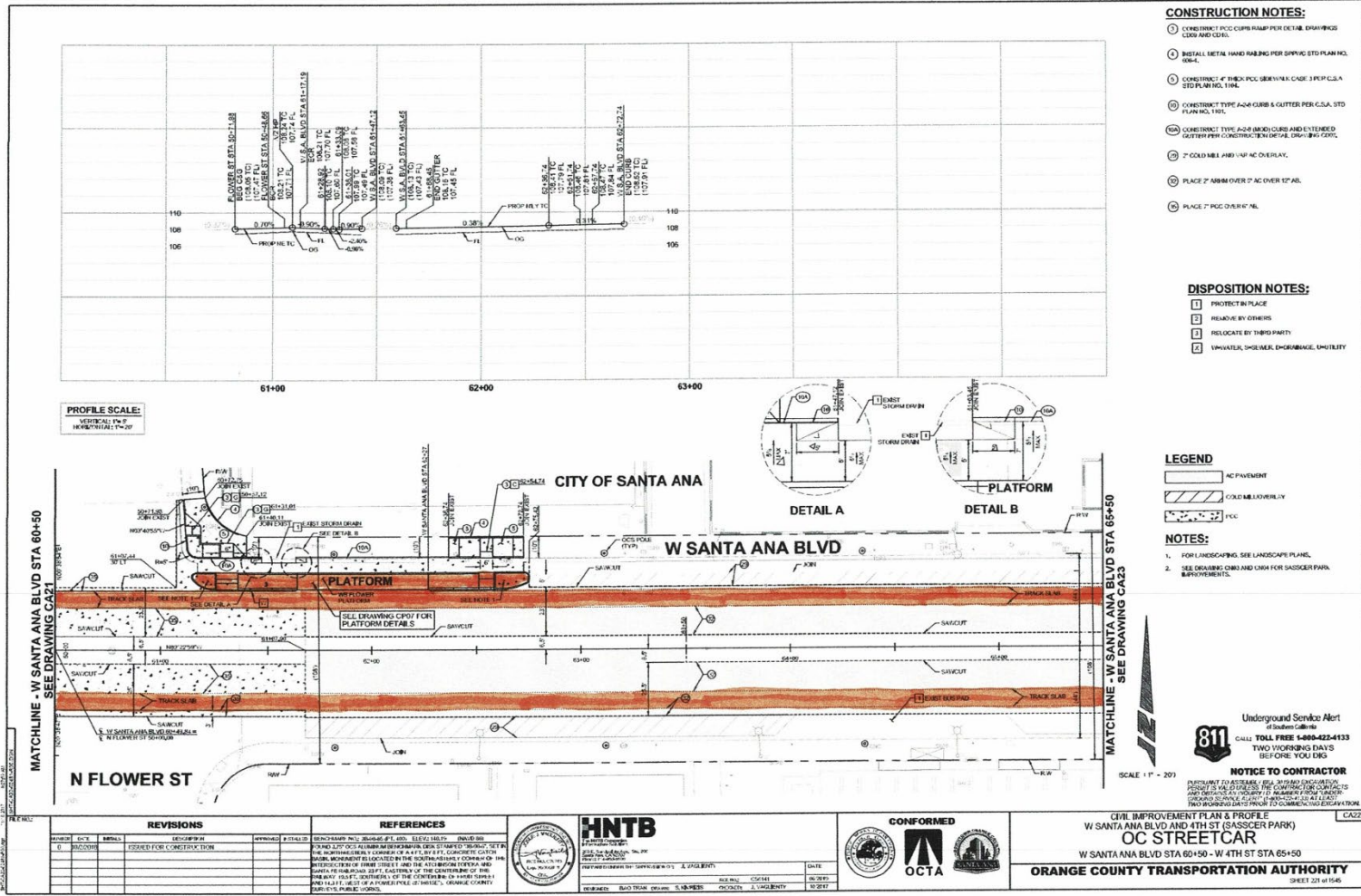
DESIGNED AND DRAWN BY: HNTB  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 RAYBURN DRIVE, SUITE 200  
 COSTA MESA, CA 92626  
 TEL: 714.440.2600  
 FAX: 714.440.2601  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA  
 DATE: [ ]/[ ]/[ ]  
 DESIGNED: [ ]/[ ]/[ ]  
 CHECKED: [ ]/[ ]/[ ]  
 APPROVED: [ ]/[ ]/[ ]

CIVIL IMPROVEMENT PLAN AND PROFILE  
**W SANTA ANA BLVD**  
**OC STREETCAR**  
 W SANTA ANA BLVD STA 55+00 - STA 60+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 208 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-5766-GC STREETCAR FROM HARBOR BLVD TO BART

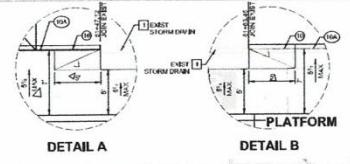


- CONSTRUCTION NOTES:**
- 1. CONSTRUCT PCC CURB RAMP PER DETAIL DRAWINGS C100 AND C101.
  - 2. INSTALL METAL HAND RAILING PER SHOPPING STD PLAN NO. 006-4.
  - 3. CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 1194.
  - 4. CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 1191.
  - 5. CONSTRUCT TYPE A-24 (MOD) CURB AND EXTENDED GUTTER PER CONSTRUCTION DETAIL, DRAWING C100.
  - 6. 2" COLD MILK ASPH/TP AC OVERLAY.
  - 7. PLACE 2" ASPH OVER 2" AC OVER 12" AB.
  - 8. PLACE 2" PCC OVER 6" ML.

- DISPOSITION NOTES:**
- 1. PROTECT IN PLACE
  - 2. REMOVE BY OTHERS
  - 3. RELOCATE BY THIRD PARTY
  - 4. UNAVAILABLE, UNDER ENGINEERING LIABILITY

- LEGEND**
- AC PAVEMENT
  - COLD MILK OVERLAY
  - PCC

- NOTES:**
1. FOR LANDSCAPING, SEE LANDSCAPE PLAN.
  2. SEE DRAWING C100 AND C101 FOR SASSICER PARK IMPROVEMENTS.



MATCHLINE - W SANTA ANA BLVD STA 60+50  
SEE DRAWING CA21

MATCHLINE - W SANTA ANA BLVD STA 65+50  
SEE DRAWING CA23

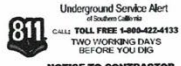
<b>REVISIONS</b>		<b>REFERENCES</b>					
NO.	DATE	BY	DESCRIPTION				

**NOTICE TO CONTRACTOR**

PARTY TO AGREEMENT: HNTB, SANTA ANA COUNTY, AND THE CITY OF SANTA ANA. HNTB HAS BEEN APPOINTED AS ENGINEER OF RECORD FOR THE OC STREETCAR PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION AND PUBLIC UTILITIES.

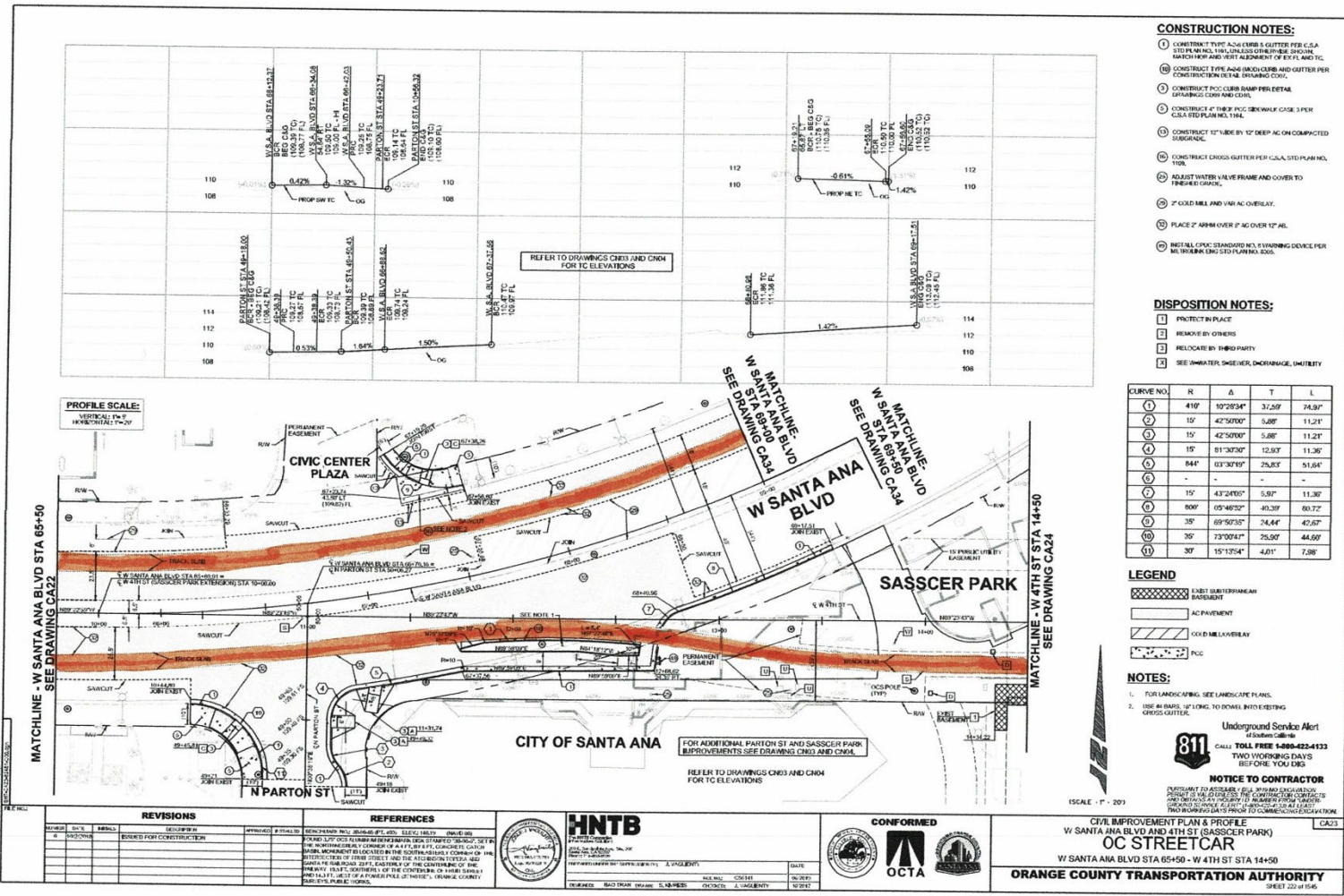
**CIVIL IMPROVEMENT PLAN & PROFILE**  
**W SANTA ANA BLVD AND 4TH ST (SASSICER PARK)**  
**OC STREETCAR**  
W SANTA ANA BLVD STA 60+50 - W 4TH ST STA 65+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**

CITY OF SANTA ANA PROJECT NO. 17-5765-C1 OC STREETCAR FROM HARBOR BLVD TO SARTY



SCALE: 1" = 20'

SHEET 021 OF 045



**CONSTRUCTION NOTES:**

1. CONSTRUCT TYPE A-6 CURB & GUTTER PER C.S.A. STD PLAN NO. 111.300 (SEE DRAWING CA22) MATCH HORIZ AND VERT ALIGNMENT OF EX'G PLAN AND TC.
2. CONSTRUCT TYPE A-6B (BAND CURB) AND GUTTER PER CONSTRUCTION DETAIL (SEE DRAWING CA22).
3. CONSTRUCT PCC CURB RAMP PER DETAIL (SEE DRAWING CA22) AND COALS.
4. CONSTRUCT 4" HEBT PCC GROWTH CASE 3 PER C.S.A. STD PLAN NO. 111.300.
5. CONSTRUCT 12" (MIN) BY 12" DEEP AC ON COMPACTED SUBGRADE.
6. CONSTRUCT CROSS GUTTER PER C.S.A. STD PLAN NO. 110.1.
7. ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
8. 2" COOL MILL AND VAR AC OVERLAY.
9. PLACE 2" ASPH OVER 2" AC OVER 12" AC.
10. INSTALL CPVC STANDARD NO. 5 WARNING DEVICE PER DETAIL (SEE C.S.A. STD PLAN NO. 100.5).

**DISPOSITION NOTES:**

- 1. EXIST IN PLACE
- 2. REMOVE BY OTHERS
- 3. RELOCATE BY OTHER PARTY
- 4. SEE WATER, SINKER, DRAINAGE, UTILITY

CURVE NO.	R	Δ	T	L
1	410'	10°25'24"	37.50'	74.93'
2	15'	42°50'00"	5.88'	11.21'
3	15'	42°50'00"	5.88'	11.21'
4	15'	81°30'00"	12.53'	11.36'
5	844'	03°30'19"	26.83'	51.64'
6	-	-	-	-
7	15'	43°24'00"	5.87'	11.30'
8	800'	03°46'52"	40.33'	80.72'
9	35'	89°50'52"	24.44'	45.67'
10	35'	73°07'41"	25.93'	44.69'
11	35'	15°13'54"	4.01'	7.88'

**LEGEND**

- EXIST SUBSTRUCTURE BASEMENT
- AC PAVEMENT
- COOL MILL & OVERLAY
- PCC

**NOTES:**

1. FOR LANDSCAPING, SEE LANDSCAPE PLANS.
2. USE 4" MIN. 1/2" LONG, 1/2" DIAM. RIVETS TO SECURE CROSS GUTTER.

Underground Service Alert  
 CALL TOLL FREE 1-866-422-4333  
 TWO WORKING DAYS BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 CONTRACTOR TO ACCESSIBLE (SEE DRAWING CA22) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR TO NOTIFY ALL UTILITY OWNERS AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

SCALE: 1" = 20'

**PROFILE SCALE:**  
 VERTICAL: 1" = 2'  
 HORIZONTAL: 1" = 20'

MATCHLINE - W SANTA ANA BLVD STA 65+50  
SEE DRAWING CA22

MATCHLINE - W 4TH ST STA 14+50  
SEE DRAWING CA22

REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	08/14/2018	ISSUED FOR CONSTRUCTION			

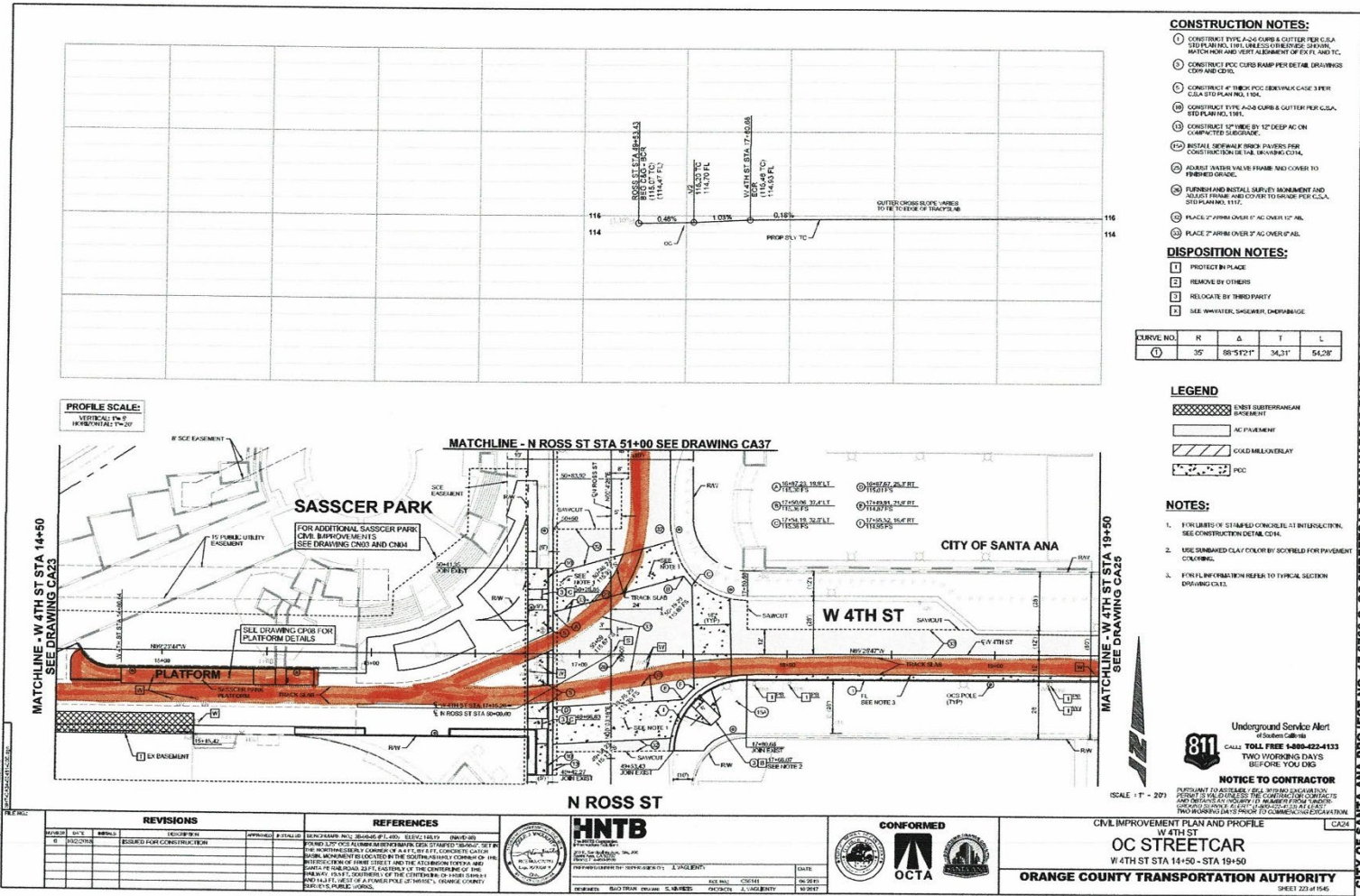
**HNTB**  
 HNTB CONSULTANTS, INC.  
 10000 WEST 16TH AVENUE, SUITE 100  
 DENVER, COLORADO 80242  
 TEL: 303.440.2000 FAX: 303.440.2001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA

PROJECT: CIVIL IMPROVEMENT PLAN & PROFILE  
 W SANTA ANA BLVD AND 4TH ST (SASSCER PARK)  
 W SANTA ANA BLVD STA 65+50 - W 4TH ST STA 14+50  
 DATE: 08/14/2018  
 DRAWN BY: S. HARRIS  
 CHECKED BY: A. GARDNER

CIVIL IMPROVEMENT PLAN & PROFILE  
 W SANTA ANA BLVD AND 4TH ST (SASSCER PARK)  
 OC STREETCAR  
 W SANTA ANA BLVD STA 65+50 - W 4TH ST STA 14+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 224 OF 1646

CITY OF SANTA ANA PROJECT NO. 17-5768-G-OC STREETCAR FROM HARBOR BLVD TO SARTY



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 1191. UNLESS OTHERWISE SHOWN, MATCH HOR AND VERT ALIGNMENT OF EX PL AND TC.
  - CONSTRUCT POE CURB RAMP PER DETAIL DRAWINGS C09 AND C10.
  - CONSTRUCT 4" THICK POE SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 1191.
  - CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 1191.
  - CONSTRUCT 6" DEEP BY 12" DEEP AC ON COMPACTED SUBGRADE.
  - INSTALL SIDEWALK BRICK PAVERS PER CONSTRUCTION DETAIL DRAWING C04.
  - ADJUST MANHOLE VALVE FRAME AND COVER TO FINISHED GRADE.
  - FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD PLAN NO. 1112.
  - PLACE 2" ARRI OVER 6" AC OVER 12" AB.
  - PLACE 2" ARRI OVER 2" AC OVER 6" AB.
- DISPOSITION NOTES:**
- PROTECT BY PLACE
  - REMOVE BY OTHERS
  - RELOCATE BY THIRD PARTY
  - SEE WATER, GAS, SEWER, CABLE/PHONE

CURVE NO.	R	Δ	T	L
1	35'	88°5'21"	34.31'	64.08'

- LEGEND**
- EXIST SUBSTERRANEAN
  - EXIST PAVEMENT
  - AC PAVEMENT
  - COLD MILL/OVERLAY
  - POE

- NOTES:**
- FOR CURBS OF STAMPED CONCRETE AT INTERSECTION, SEE CONSTRUCTION DETAIL C04.
  - USE UNBANKED CLAY COLOR BY SCORING FOR PAVEMENT COLORING.
  - FOR FURTHER INFORMATION REFER TO TYPICAL SECTION DRAWING C04.

Underground Service Alert  
 of Southern California  
**811** CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PERMIT TO ACCESS: \$ 250.00 (NON-REFUNDABLE)  
 PERMITS TO BE OBTAINED FROM THE CONTRACTOR'S COUNTY OF RESIDENCE AS EARLY AS POSSIBLE AT LEAST TWO WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.

CIVIL IMPROVEMENT PLAN AND PROFILE  
 W 4TH ST  
 OC STREETCAR  
 W 4TH ST STA 14+50 - STA 19+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 223 OF 1645

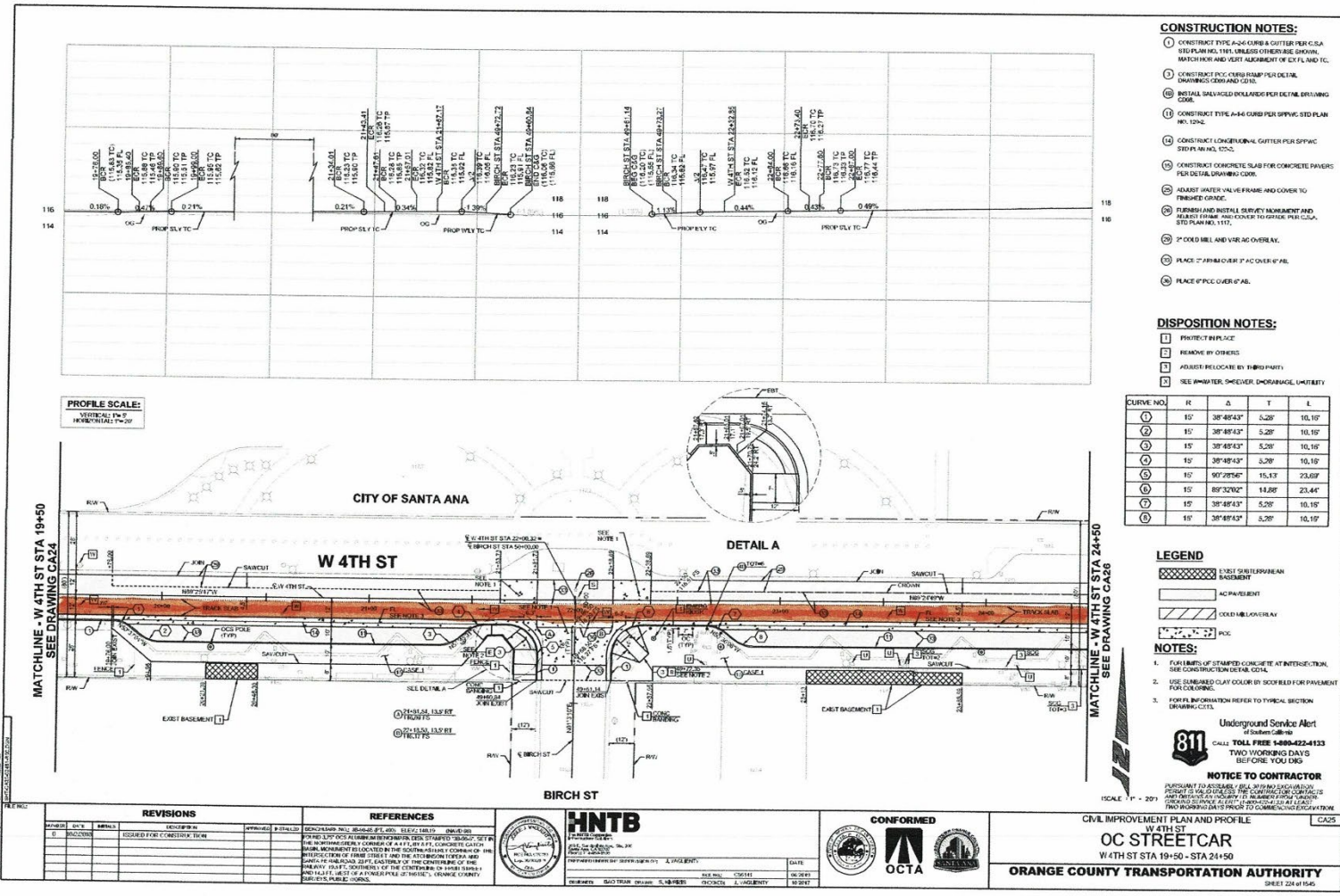
REVISIONS				REFERENCES			
NO.	DATE	REVISION	APPROVED	NO.	DATE	REFERENCE	APPROVED

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 1000  
 DENVER, COLORADO 80202  
 PHONE: 303.733.1000 FAX: 303.733.1001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA

DATE: 06/28/11  
 DRAWN BY: J. L. GARDNER  
 CHECKED BY: J. L. GARDNER  
 DESIGNED BY: J. L. GARDNER  
 PROJECT: OC STREETCAR

CITY OF SANTA ANA PROJECT NO. 17-8766-C: OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE A-26 CURB & GUTTER PER C.S.A. 515 PER FIG. 118, UNLESS OTHERWISE SHOWN. MATCH HOR AND VERT ALIGNMENT OF EX FL AND TC.
  - CONSTRUCT PCC CURB RAMP PER DETAIL DRAWING C000 AND C018.
  - INSTALL SALLY HOLED DRILLAGE PER DETAIL DRAWING C006.
  - CONSTRUCT TYPE A-16 CURB PER SPWVC STD PLAN FIG. 1204.
  - CONSTRUCT CONC RETAINING GUTTER PER SPWVC STD PLAN FIG. 1204.
  - CONSTRUCT CONCRETE SLAB FOR CONCRETE PAVEMENT PER DETAIL DRAWING C006.
  - ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
  - FINISH AND INSTALL DRIVEY IN MANHOLE AND ADJUST FRAME AND COVER TO FINISH PER C.S.A. STD PLAN FIG. 1117.
  - 2" COED HILL AND VERAC OVERLAY.
  - PLACE 2" FIRM OVER 2" AC OVER F&B.
  - PLACE 2" PCC OVER F&B.

- DISPOSITION NOTES:**
- PROTECT EXISTENCE
  - REMOVE BY OTHERS
  - ADJUST RELOCATE BY FIELD PARTY
  - SEE PARTNER, SHEET/COVER, DRAINAGE, UTILITY

CURVE NO.	R	Δ	T	L
1	15'	39°48'43"	3.26'	10.15'
2	15'	39°48'43"	3.26'	10.15'
3	15'	39°48'43"	3.26'	10.15'
4	15'	39°48'43"	3.26'	10.15'
5	10'	90°28'56"	15.13'	23.60'
6	15'	89°32'02"	14.88'	23.44'
7	15'	39°48'43"	3.26'	10.15'
8	15'	39°48'43"	3.26'	10.15'

- LEGEND**
- EXIST EXISTING BASEMENT
  - AC-PAVEMENT
  - COED HILL OVERLAY
  - PCC

- NOTES:**
- FURNISH 10' OF STAMPED CONCRETE AT INTERSECTION. SEE CONSTRUCTION DETAIL C014.
  - USE SHIMMERED CLAY COLOR BY SCORBED FOR PAVEMENT FOR COLORING.
  - FOR ALL INFORMATION REFER TO TYPICAL SECTION DRAWING C015.

**811** Underground Service Alert  
 CALL TOLL FREE 1-888-422-1333  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**

PERMIT TO ASSEMBLY SHALL BE IN COMPLIANCE WITH ALL LOCAL ORDINANCES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

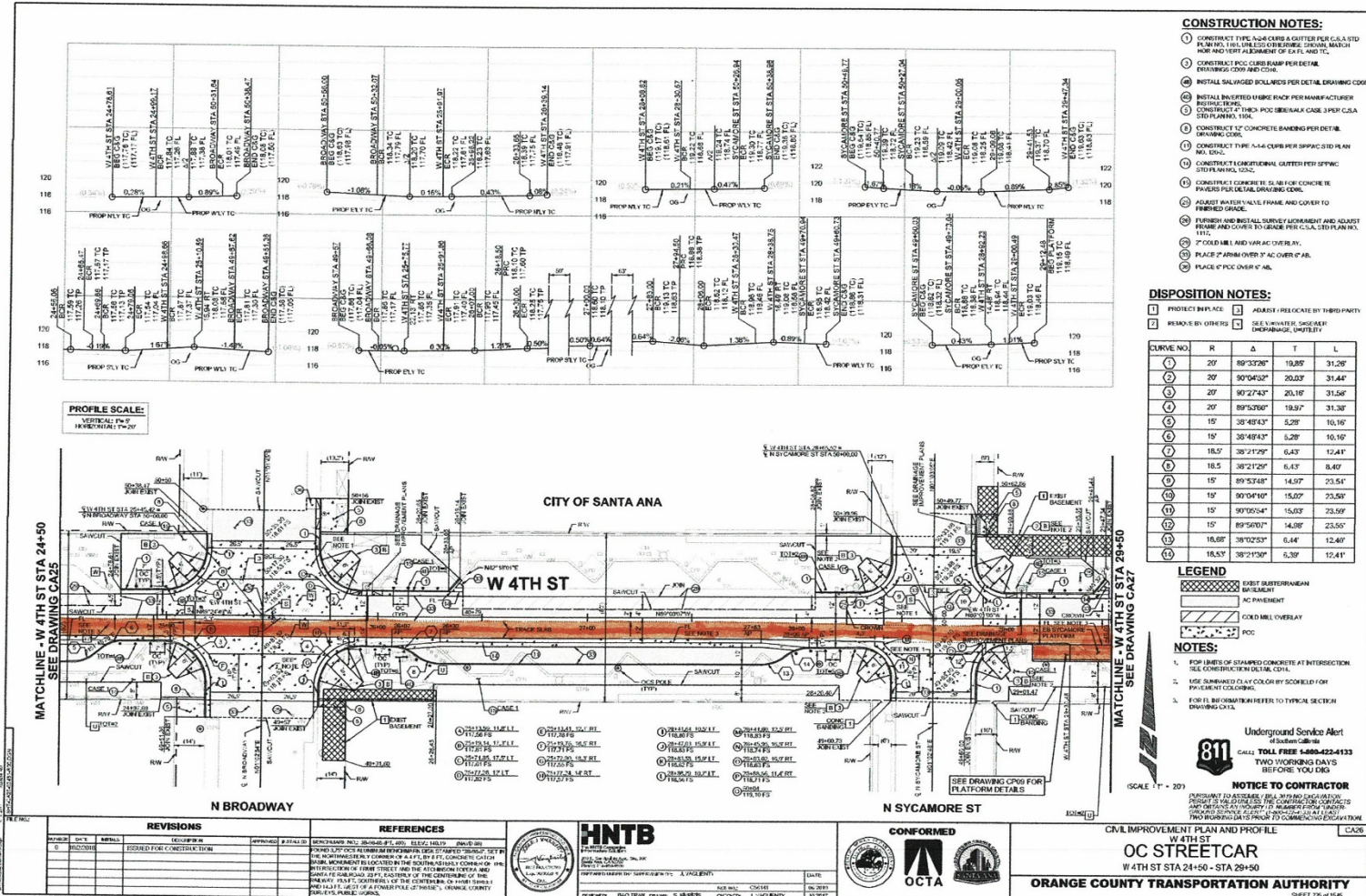
REVISIONS		REFERENCES	
NO.	DATE	DESCRIPTION	BY
1	08/15/2018	ISSUED FOR CONSTRUCTION	...

**HNTB**  
 HNTB CONSULTANTS, INC.  
 10000 WEST 16TH AVENUE, SUITE 100  
 DENVER, COLORADO 80202  
 TEL: 303.733.8000 FAX: 303.733.8001  
 WWW.HNTB.COM

**CONFORMED**  
**OCTA**  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN AND PROFILE  
 W 4TH ST  
 OC STREETCAR  
 W 4TH ST STA 19+50 - STA 24+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 224 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-8766-C7 OC STREETCAR FROM HARBOR BLVD TO SARTO



**CONSTRUCTION NOTES:**

1. CONSTRUCT TYPE A-4 CURBS & GUTTER PER CAL STD PLAN NO. 105 (SEE SECTION FOR CURBS, GUTTER, MATCH FOR ADJ. ST. ALIGNMENT OF ST. C. AND T.).
2. CONSTRUCT PCC CURBS RAMP PER DETAIL DRAWING CODES 0209 AND 0216.
3. INSTALL SALVAGED BOLLARDS PER DETAIL DRAWING CODE.
4. INSTALL INVERTED UMBRE RACK PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. CONSTRUCT 1" THICK PCC SIDEWALK C&G PER CAL STD PLAN NO. 106.
6. CONSTRUCT 1" CONCRETE HANDING PER DETAIL DRAWING CODE.
7. CONSTRUCT TYPE A-4 CURBS PER SP94C STD PLAN NO. 105.
8. CONSTRUCT CONCRETE SLAB FOR CONCRETE PAVERS PER DETAIL DRAWING CODE.
9. ADJUST MATERIALS FRAME AND COVER TO FINISHED GRADE.
10. FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER CAL STD PLAN NO. 111.
11. PLACE 6" SAND OVER PAV. OVERLAY.
12. PLACE 6" PCC OVER 6" PAV.

**DISPOSITION NOTES:**

1. PROTECT IN PLACE
2. REMOVE BY OTHERS
3. ADJUST / RELOCATE BY THIRD PARTY
4. SEE WATER, SLOPE, DRAINAGE, UTILITY

CURVE NO.	R	Δ	T	L
1	20'	89°33'26"	19.85'	31.28'
2	20'	90°04'52"	20.03'	31.44'
3	20'	90°27'43"	20.16'	31.58'
4	20'	89°57'06"	19.97'	31.30'
5	15'	38°48'43"	5.28'	10.16'
6	15'	38°48'43"	5.28'	10.16'
7	18.5'	38°21'29"	6.43'	12.41'
8	18.5'	38°21'29"	6.43'	8.40'
9	15'	89°57'48"	14.97'	23.51'
10	15'	90°04'10"	15.02'	23.50'
11	15'	90°05'54"	15.03'	23.50'
12	15'	89°57'07"	14.98'	23.50'
13	18.5'	38°02'53"	6.44'	12.40'
14	18.5'	38°17'30"	6.39'	12.41'

**LEGEND**

- EXIST. SUBSTRUCTURE
- EXIST. PAVEMENT
- C&G OVERLAY
- COLD MILL OVERLAY
- PCC

**NOTES:**

1. FOR LINES OF STAMPED CONCRETE AT INTERSECTION SEE CONSTRUCTION DETAIL CODE.
2. USE SHADDED CLAY COLOR BY SCHEDULE FOR PAVEMENT COLORING.
3. FOR FL. BE CONSTRUCTION REFER TO TYPICAL SECTION DRAWING DATA.

Underground Service Alert  
 of Southern California  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**

PERMIT TO CONSTRUCT SHALL BE OBTAINED FROM THE COUNTY ENGINEER'S OFFICE. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE COUNTY ENGINEER'S OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE COUNTY ENGINEER'S OFFICE.

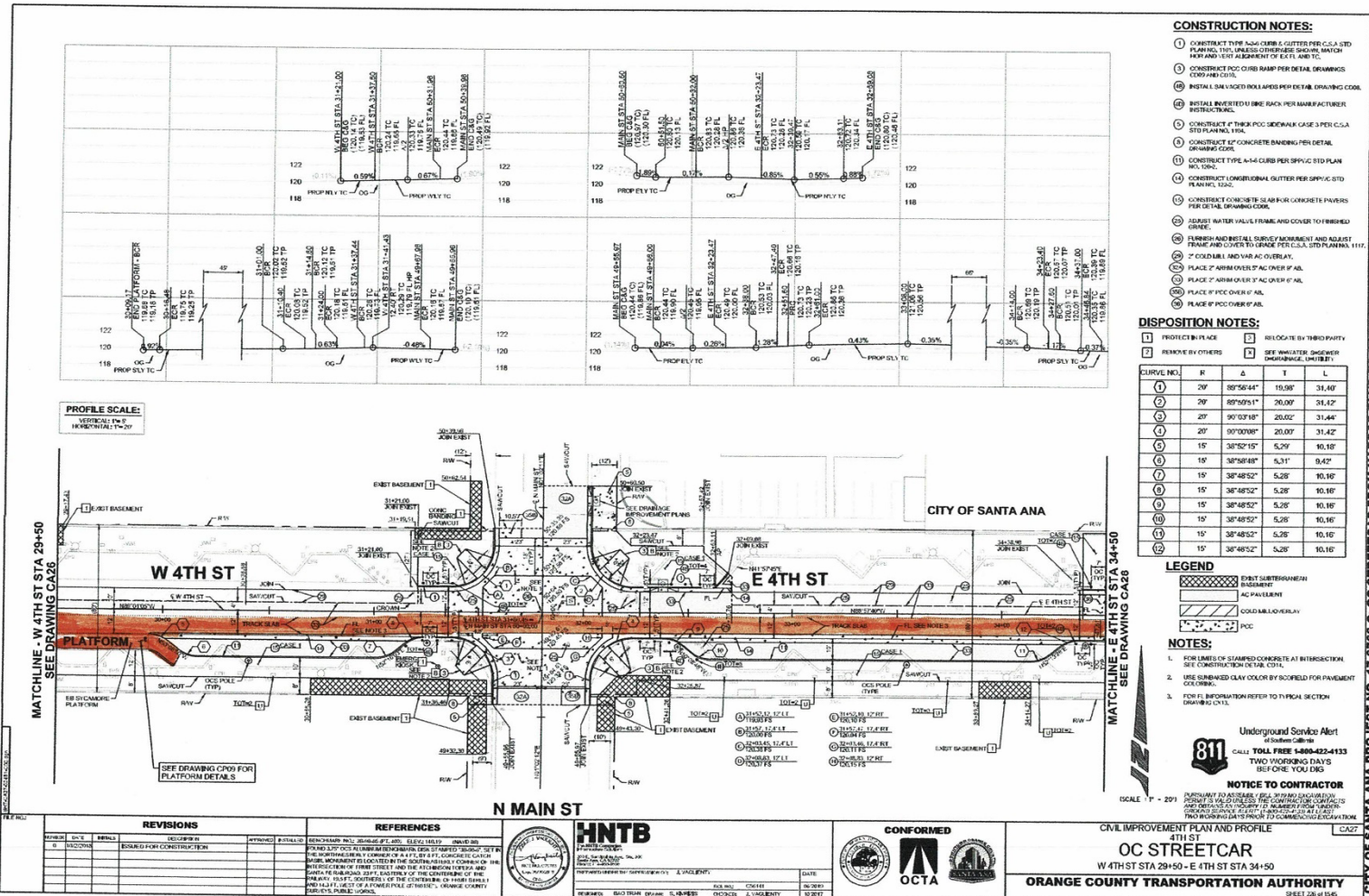
NO.	DATE	REVISIONS	APPROVED	BY	DATE	REFERENCES
1	02/14/2024	ISSUED FOR CONSTRUCTION				

**HNTB**  
 HNTB COMPANY, INC.  
 1500 WEST 10TH STREET, SUITE 200  
 ANAHEIM, CALIFORNIA 92801  
 TEL: 714 771-4000 FAX: 714 771-4001  
 WWW.HNTB.COM



CIVIL IMPROVEMENT PLAN AND PROFILE  
**W 4TH ST  
 OC STREETCAR**  
 W 4TH ST STA 24+50 - STA 29+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 205 OF 1946

CITY OF SANTA ANA PROJECT NO. 17-8765-01 OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE 4-4 CURB & GUTTER PER C.S.A. STD PLAN NO. 115 UNLESS OTHERWISE SHOWN. MATCH HWT AND VERT ALIGNMENT OF EX.FL AND TC.
  - CONSTRUCT 2% CURB RAMP PER DETAIL DRAWINGS. COMPARE 1025.
  - INSTALL 2.0" LAYER OF 1/2" RADIUS PER DETAIL DRAWINGS. COMPARE 1025.
  - INSTALL INVERTED U-BONE RACK PER MANUFACTURER'S INSTRUCTIONS.
  - CONSTRUCT 4" THICK RCP SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 116A.
  - CONSTRUCT 4" CONCRETE BANDING PER DETAIL DRAWINGS. COMPARE 1025.
  - CONSTRUCT TYPE 4-4 CURB PER SUPV. STD PLAN NO. 115A.
  - CONSTRUCT LONGITUDINAL GUTTER PER SUPV. STD PLAN NO. 115A.
  - CONSTRUCT CONCRETE SLAB FOR CONCRETE PAVERS PER DETAIL DRAWINGS. COMPARE 1025.
  - ADJUST WATER VALVE FRAMING AND COVER TO FINISHED GRADE.
  - FINISH AND INSTALL CURB CEMENT AND ADJUST FRAMING AND COVER TO GRADE PER C.S.A. STD PLAN NO. 115A.
  - 2" COLD LIME AND 1/4" AC OVERLAY.
  - PLACE 2" AIRMOVER 1" AC OVER PAV.
  - PLACE 2" AIRMOVER 1" AC OVER PAV.
  - PLACE 1" FOC OVER PAV.
  - PLACE 1" FOC OVER PAV.

**DISPOSITION NOTES:**

- PROTECT IN PLACE
- REMOVE BY OTHERS
- RELOCATE BY THIRD PARTY
- SEE UNLATER DESIGNER OR CHANGEABILITY

CURVE NO.	R	Δ	T	L
1	20'	89°56'44"	19.98'	31.40'
2	20'	89°56'44"	20.00'	31.42'
3	20'	90°02'18"	20.02'	31.44'
4	20'	90°00'08"	20.00'	31.42'
5	15'	36°52'15"	5.29'	10.16'
6	15'	36°58'48"	5.31'	10.16'
7	15'	36°48'52"	5.28'	10.16'
8	15'	36°48'52"	5.28'	10.16'
9	15'	36°48'52"	5.28'	10.16'
10	15'	36°48'52"	5.28'	10.16'
11	15'	36°48'52"	5.28'	10.16'
12	15'	36°48'52"	5.28'	10.16'

- LEGEND**
- EXIST SUBSTRAIN
  - AS PAVED
  - COLD LIME OVERLAY
  - FOC

- NOTES:**
- FOR LINES OF STAMPED CONCRETE AT INTERSECTION SEE CONSTRUCTION DETAIL C014.
  - USE DARKENED CLAY COLOR BY SCOFFED FOR PAVEMENT COLORING.
  - FOR FL INFORMATION REFER TO TYPICAL SECTION DRAWING C015.

**Underground Service Alert**  
 811  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PURSUANT TO ORDINANCE 11611, BY ANY SCHEDULED POINTS OF CONTACT, THE CONTRACTOR SHALL MAINTAIN AND PRESERVE THE EXISTING UTILITIES AND SERVICES UNDER THE STREET AND SIDEWALKS TO REMAIN UNDISTURBED THROUGHOUT THE PROJECT PERIOD.

CITY OF SANTA ANA PROJECT NO. 17-5766-CI OC STREETCAR FROM HARBOR BLVD TO SANTA ANA

**PROFILE SCALE:**  
 VERTICAL: 1" = 4'  
 HORIZONTAL: 1" = 20'

MATCHLINE - W 4TH ST STA 29+50  
 SEE DRAWING CA26

MATCHLINE - E 4TH ST STA 34+50  
 SEE DRAWING CA28

NO.	DATE	REVISIONS	BY	CHKD	APP'D	DETAILS	REFERENCES
1	08/14/2018	ISSUED FOR CONSTRUCTION					

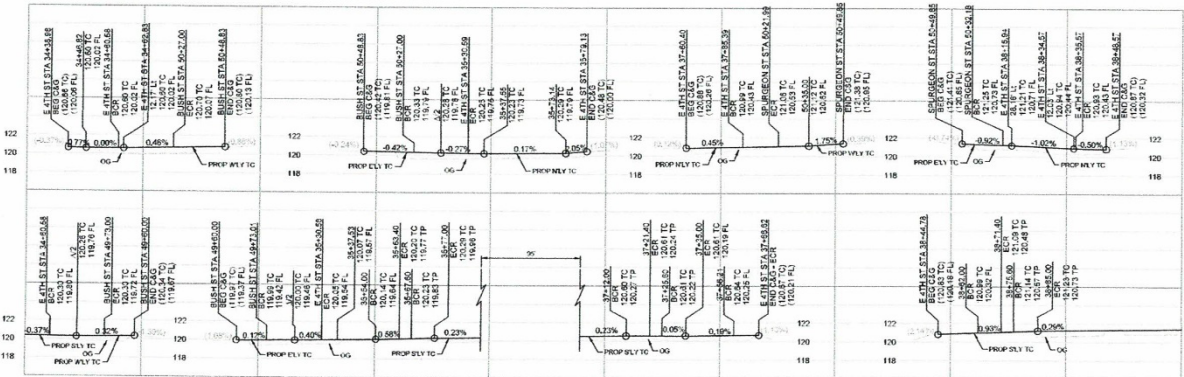
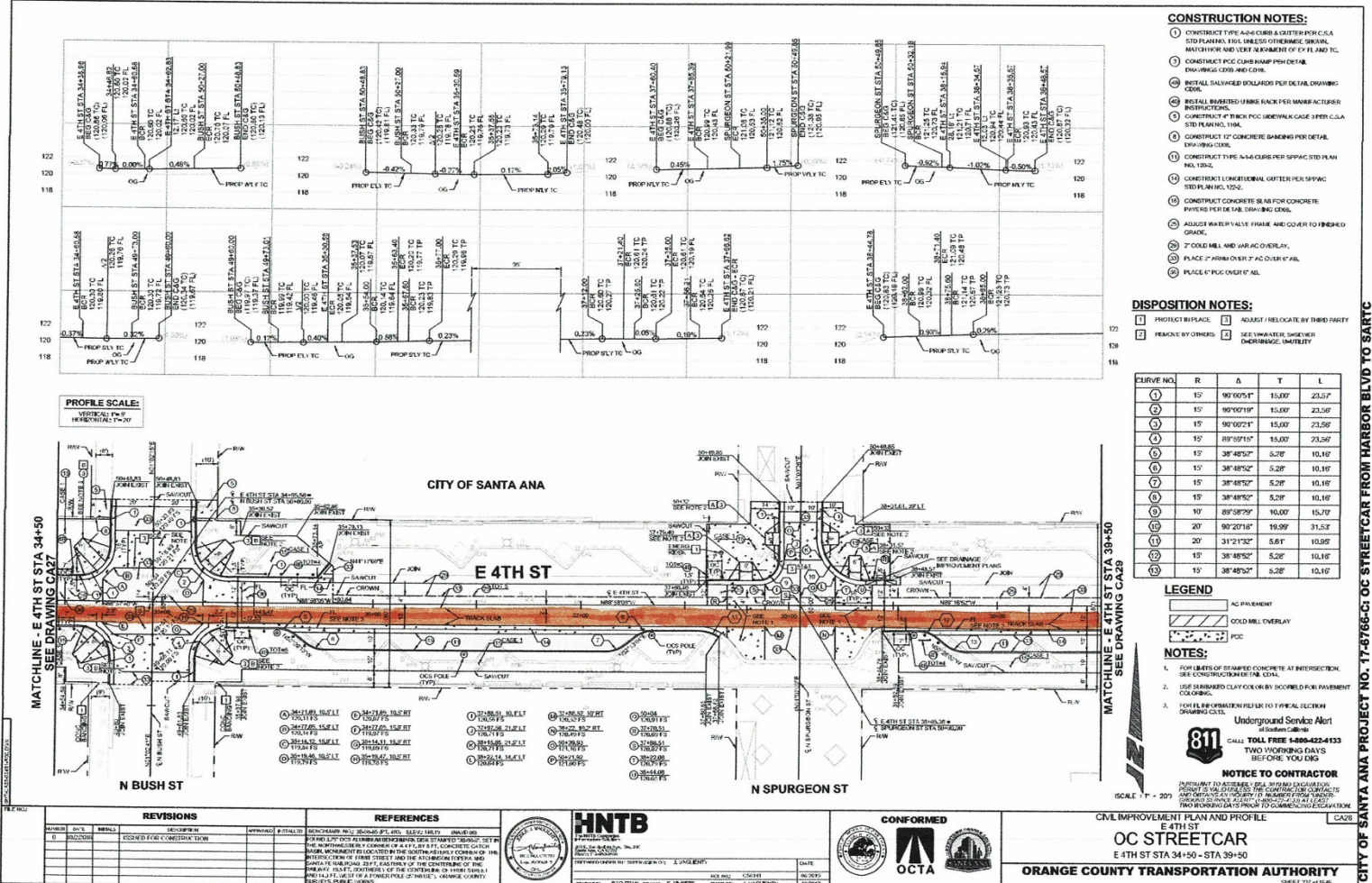
**HNTB**  
 CONSULTING ENGINEERS  
 1000 WEST 10TH AVENUE, SUITE 200  
 ANAHEIM, CALIFORNIA 92801  
 TEL: 714 771-1000 FAX: 714 771-1001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN AND PROFILE  
 4TH ST  
 OC STREETCAR  
 W 4TH ST STA 29+50 - E 4TH ST STA 34+50

**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 228 of 1545





PROFILE SCALE:  
VERTICAL: 1" = 2'  
HORIZONTAL: 1" = 20'

- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE A-6 CURB & GUTTER PER C.A. STD. PLAN NO. 116. UNLESS OTHERWISE SHOWN, MATCH FOR AND VERT. ALIGNMENT OF EX. FL AND TC.
  - CONSTRUCT PCC CURB AND GUTTER PER DETAIL DRAWING CON.
  - INSTALL SALVAGED BOLARDS PER DETAIL DRAWING CON.
  - INSTALL BARRIER FENCE BACK PER MANUFACTURER'S INSTRUCTIONS.
  - CONSTRUCT 1" THICK PCC SIDEWALK GAGE 1 PER C.A. STD. PLAN NO. 116A.
  - CONSTRUCT 1" CONCRETE BANDING PER DETAIL DRAWING CON.
  - CONSTRUCT TYPE A-6 CURB PER SPWAC STD. PLAN NO. 120A.
  - CONSTRUCT LONGITUDINAL GUTTER PER SPWAC STD. PLAN NO. 120C.
  - CONSTRUCT CONCRETE SLAB FOR CONCRETE PAVEMENT PER DETAIL DRAWING CON.
  - ADJUST WATER VALVE FRAM AND COVER TO FINISHED GRADE.
  - 2" COIL MELL AND AIR AC OVERLAY.
  - PLACE 2" FIRM OVER 1" AC OVER 1" FILL.
  - PLACE 1" PCC OVER 1" FILL.

- DISPOSITION NOTES:**
- PROTECT BY FENCE
  - REMOVE BY OTHERS
  - NOT SET / RELOCATED BY THIRD PARTY
  - SEE MANHOLE / GUTTER / DRAINAGE / UTILITY

CURVE NO.	R	Δ	T	L
1	15'	90°00'54"	15.00'	23.57'
2	15'	90°00'18"	15.00'	23.56'
3	15'	90°00'21"	15.00'	23.56'
4	15'	89°59'15"	15.00'	23.56'
5	15'	38°48'52"	5.28'	10.16'
6	15'	38°48'52"	5.28'	10.16'
7	15'	38°48'52"	5.28'	10.16'
8	15'	38°48'52"	5.28'	10.16'
9	10'	89°58'59"	10.00'	15.70'
10	20'	90°20'18"	19.99'	31.53'
11	20'	31°2'32"	5.61'	10.95'
12	15'	38°48'52"	5.28'	10.16'
13	15'	38°48'52"	5.28'	10.16'

- LEGEND**
- AC PAVEMENT
  - COIL MELL OVERLAY
  - PCC

- NOTES:**
- FOR LAYOUT OF STAMPER CONCRETE AT INTERSECTION, SEE CONSTRUCTION OF TRM CON.
  - USE DAMAGED CLAY COLOR BY SCORDED FOR PAVEMENT COLORING.
  - FOR FURTHER INFORMATION REFER TO TYPICAL SECTION DRAWING CON.
- Underground Service Alert  
of Southern California  
**811**  
CALL TOLL FREE 1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG
- NOTICE TO CONTRACTOR**  
PREPARED TO ADDRESS THE SHOWN DISCREPANCIES AND TO CORRECT THE SHOWN DISCREPANCIES. CONTRACTOR SHALL VERIFY THE SHOWN DISCREPANCIES AND CORRECT THEM AT HIS OWN RISK AND AT HIS OWN EXPENSE PRIOR TO COMMENCING CONSTRUCTION.

**REVISIONS**

NO.	DATE	DESCRIPTION
1	01/15/2020	FOR CONSTRUCTION

**REFERENCES**

MINOR: [ ]  
MAJOR: [ ]  
APPROVED: [ ]

**HNTB**  
HNTB CONSULTANTS, INC.  
1000 WEST 10TH AVENUE, SUITE 100  
DENVER, COLORADO 80202  
TELEPHONE: 303.733.1000  
FAX: 303.733.1001  
WWW.HNTB.COM

**CONFORMED**  
OCTA

DATE: [ ]  
BY: [ ]

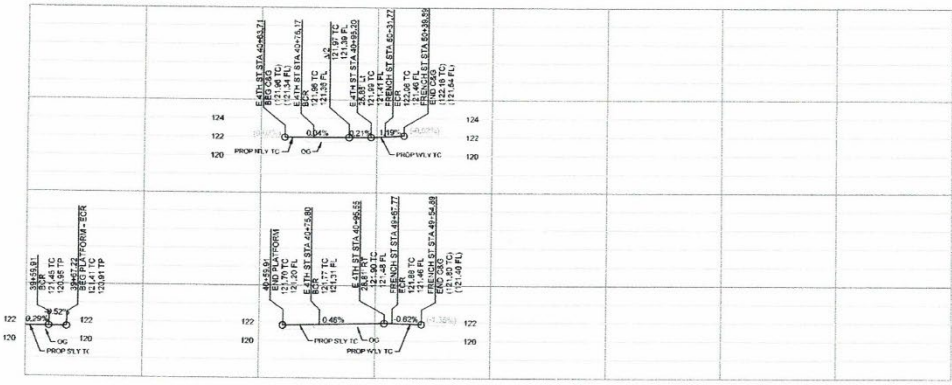
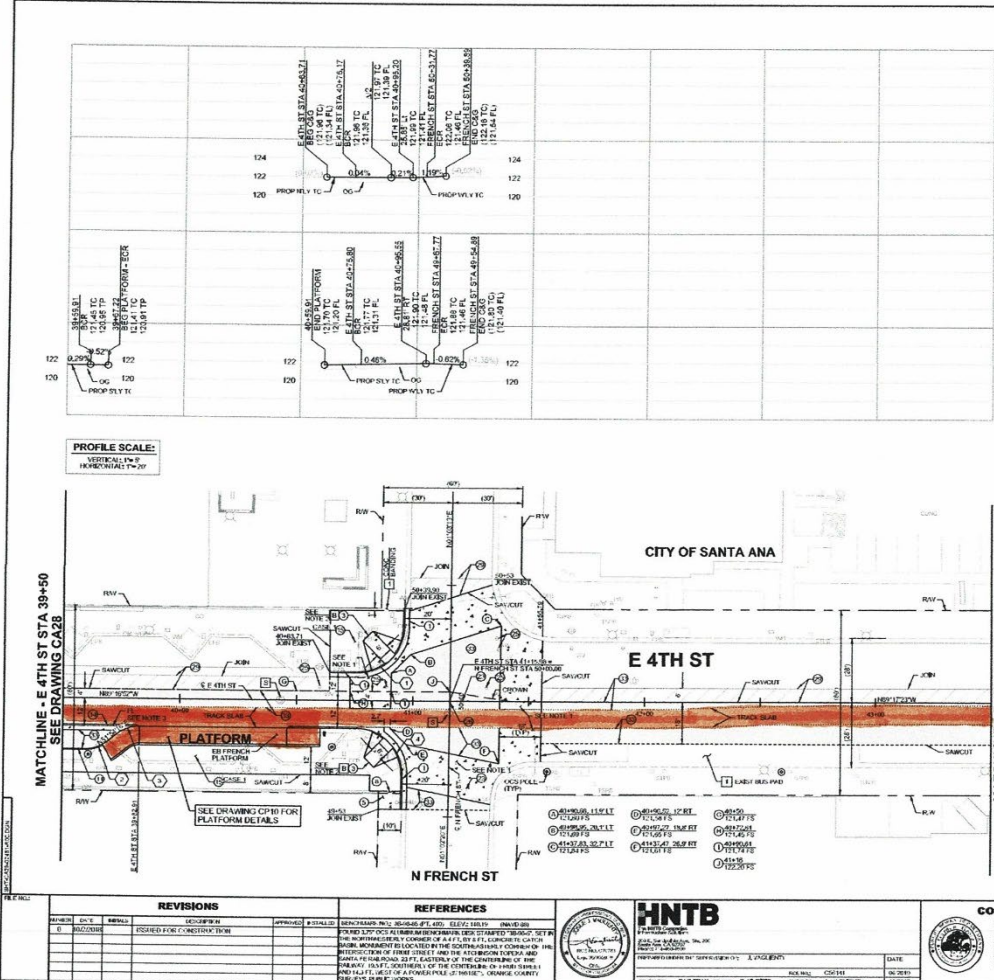
CIVIL IMPROVEMENT PLAN AND PROFILE  
E 4TH ST  
OC STREETCAR  
E 4TH ST STA 34+50 - STA 39+50

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

SCALE: 1" = 20'

SHEET 22 OF 1545

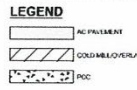
CITY OF SANTA ANA PROJECT NO. 17-8765-C5 OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE A-3 CURB & GUTTER PER C.S.A. STD. PLAN NO. 110. UNLESS OTHERWISE SPECIFIED, MATCH FOR AND VERT. ALIGNMENT OF EX. PL. AND TC.
  - CONSTRUCT PCC CURB RAMP PER DETAIL DRAWINGS C009 AND C010.
  - CONSTRUCT 4" THICK PCC SIDEWALK CASE 1 PER C.S.A. STD. PLAN NO. 110A.
  - CONSTRUCT 4" CONCRETE FINISHING PER DETAIL DRAWING C00A.
  - CONSTRUCT TYPE A-4 CURB PER SPECIAL STD. PLAN NO. 110N.
  - CONSTRUCT LONGITUDINAL GUTTER PER SPECIAL STD. PLAN NO. 122L.
  - CONSTRUCT CONCRETE SLAB FOR CONCRETE PAVERS PER DETAIL DRAWING C00A.
  - ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  - ADJUST WATER UTILITY FRAME AND COVER TO FINISHED GRADE.
  - FURNISH AND INSTALL SURVEY MONUMENT AND RESET FRAME AND COVER TO GRADE PER C.S.A. STD. PLAN NO. 111E.
  - 2" COLD MILL AND VAR. AC OVERLAY.
  - PLACE 2" ASPHALT OVER 2" AC OVERLAY.

- DISPOSITION NOTES:**
- PROTECT BY PLACE
  - REMOVE BY OTHERS
  - RELOCATE BY THIRD PARTY
  - AWAITS SMOOTHER, DRAINAGE, UTILITY

CURVE NO.	R	Δ	T	L
1	20'	89°39'55"	19.88'	31.30'
2	15'	38°48'52"	5.28'	10.16'
3	15'	38°48'52"	5.28'	10.16'
4	20'	90°19'12"	20.11'	31.53'



- NOTES:**
- FOR LIMITS OF STAMPED CONCRETE AT INTERSECTION, SEE CONSTRUCTION DETAIL C00A.
  - USE SAND/RED CLAY COLOR BY SCORE FOR PAVEMENT COLORING.
  - FOR ALL INFORMATION REFER TO TYPICAL SECTION DRAWINGS C01A.

Underground Service Alert  
 of Southern California  
**811**  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PURSUANT TO ASSUMED RISK AND INDEMNIFICATION PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL WAIVE AND RELEASE THE CONTRACTOR CONTRACT DOCUMENTS TO THE CONTRACTOR CONTRACTOR'S SERVICE ALERT IS PROVIDED TO EACH PROJECT PARTICIPANT PRIOR TO COMMENCEMENT OF WORK.

REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	08/20/2018	ISSUED FOR CONSTRUCTION			

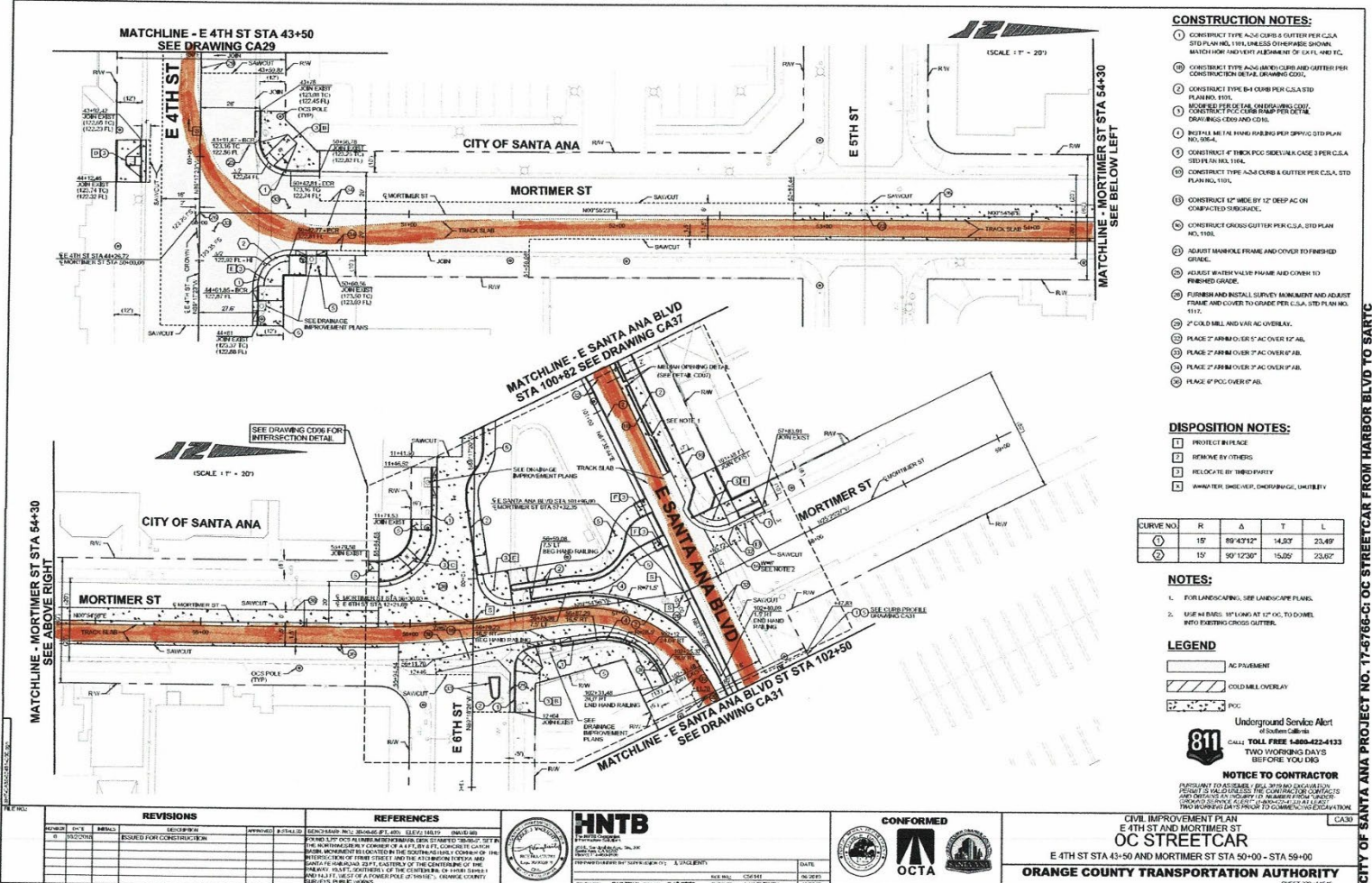
**HNTB**  
 HNTB GROUP, INC.  
 1000 WEST 10TH AVENUE, SUITE 1000  
 DENVER, COLORADO 80202  
 PHONE: 303.733.4000  
 FAX: 303.733.4001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA

DATE: 08/20/18  
 DRAWN BY: J. HARRIS  
 CHECKED BY: J. HARRIS  
 PROJECT: OC STREETCAR

CIVIL IMPROVEMENT PLAN AND PROFILE  
 E 4TH ST  
 OC STREETCAR  
 E 4TH ST STA 39+50 - STA 43+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 208 of 1546

CITY OF SANTA ANA PROJECT NO. 17-8766-CI OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD. PLAN NO. 115L. THE LINES SHOWN OVERLAP TO SHOW MATCH AND ADJUST ALIGNMENT OF EX. FL. AND E.C.
  - CONSTRUCT TYPE A-24 (MINI) CURB AND GUTTER PER CONSTRUCTION DETAIL DRAWING C001.
  - CONSTRUCT TYPE B-4 CURB PER C.S.A. STD. PLAN NO. 115L.
  - ADJUST PER FOR EX. UTIL. CONFLICTING WITH CONSTRUCTION C001 AND C002.
  - ADJUST EX. UTIL. HAVING PROBS PER CIVIL STD. PLAN NO. 105.4.
  - CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD. PLAN NO. 115L.
  - CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD. PLAN NO. 115L.
  - CONSTRUCT 12" WIDE BY 12" DEEP AC ON COMPACTED SUBGRADE.
  - CONSTRUCT CROSS GUTTER PER C.S.A. STD. PLAN NO. 115L.
  - ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  - ADJUST WASH VALVE FRAME AND COVER TO FINISHED GRADE.
  - FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD. PLAN NO. 1117.
  - 2" COLD MILL AND VAR AC OVERLAY.
  - PLACE 2" ASPHALT OVER 1" AC OVER 12" AB.
  - PLACE 2" ASPHALT OVER 1" AC OVER 12" AB.
  - PLACE 2" ASPHALT OVER 1" AC OVER 12" AB.
  - PLACE 2" PCC OVER 12" AB.

- DISPOSITION NOTES:**
- PROTECT BY PLATE
  - REMOVE BY OTHERS
  - RELOCATE BY OTHERS
  - REMOVE EXISTING, OVERLAP, UNUSABLE

CURVE NO.	R	Δ	T	L
1	15'	89°43'12"	14.00'	23.49'
2	15'	50°17'30"	15.00'	23.62'

- NOTES:**
- FOR LANDSCAPING, SEE LANDSCAPE PLANS.
  - USE 1/4" BARS 18" LONG AT 12" OC TO CURVE INFO EXISTING CROSS GUTTER.

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC

**811** Underground Service Alert  
 of Southern California  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PURSUANT TO AGREEMENT, PER 30950 AND 30950.5, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONSTRUCTION CONTRACTS FROM THE CITY OF SANTA ANA AND/OR THE COUNTY OF ORANGE. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONSTRUCTION CONTRACTS FROM THE CITY OF SANTA ANA AND/OR THE COUNTY OF ORANGE.

REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	APPROVED	DRAWN	SCALE
1	08/20/2014	ISSUED FOR CONSTRUCTION			

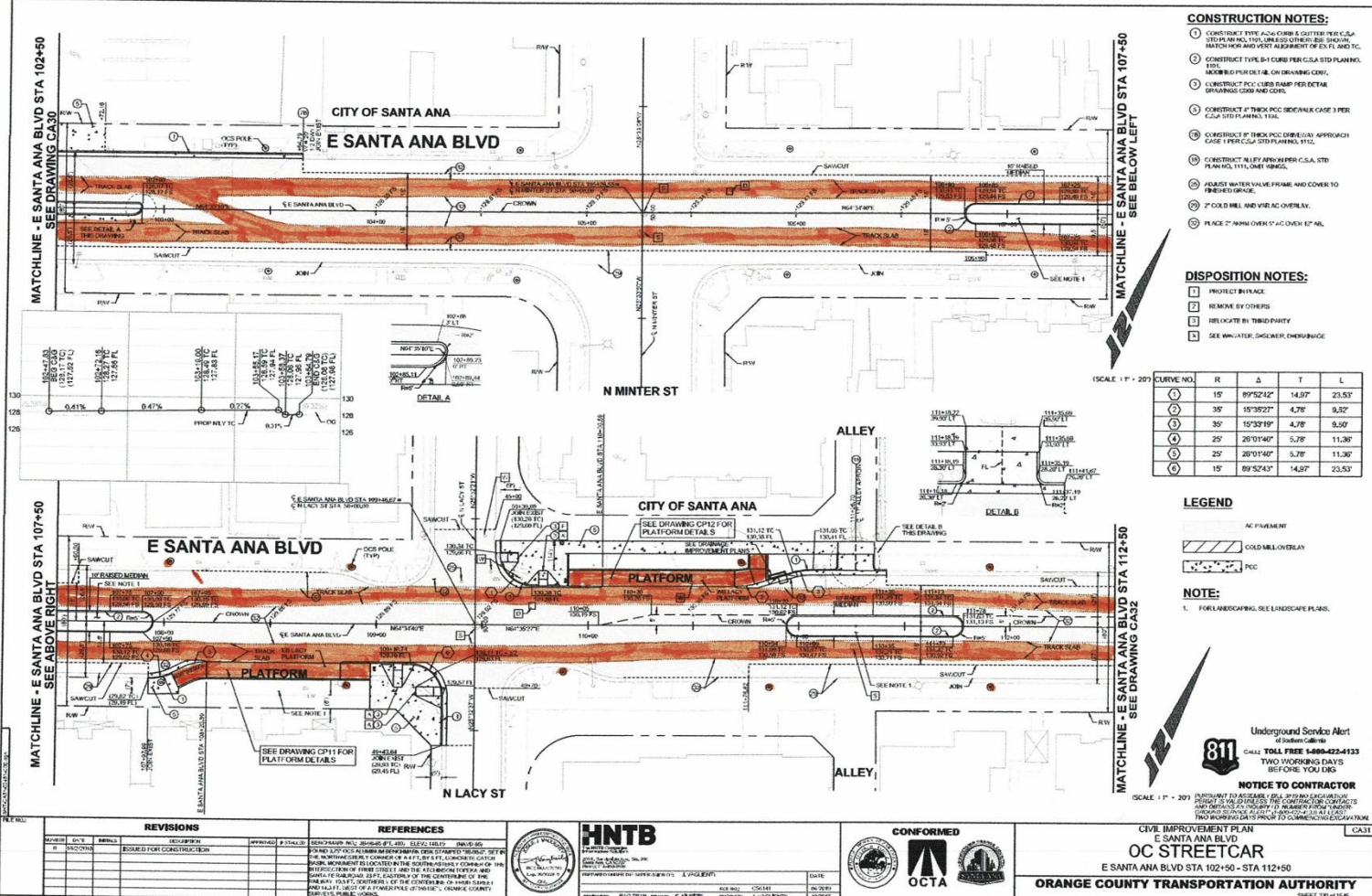
**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 200  
 ANAHEIM, CALIFORNIA 92801  
 TEL: 714 771-1000 FAX: 714 771-1001  
 WWW.HNTB.COM

DESIGNED BY: [Signature] DATE: [ ]  
 DRAWN BY: [Signature] DATE: [ ]  
 CHECKED BY: [Signature] DATE: [ ]  
 APPROVED BY: [Signature] DATE: [ ]

**CONFORMED**

**CIVIL IMPROVEMENT PLAN**  
**E 4TH ST AND MORTIMER ST**  
**OC STREETCAR**  
 E 4TH ST STA 43+50 AND MORTIMER ST STA 50+00 - STA 59+00  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 209 OF 166

CITY OF SANTA ANA PROJECT NO. 17-8766-CI OC STREETCAR FROM HARBOR BLVD TO SARTZ



- CONSTRUCTION NOTES:**
1. CONSTRUCT WITH 2.0% CURVE & CUTTER PER C.S.TD PLAN NO. 111, UNLESS OTHERWISE SHOWN. MATCH FOR ROAD PAV. ASSEMBLY PER 2.11 AND 2.12.
  2. CONSTRUCT TYPICAL CURBS PER C.S.TD PLAN NO. 111 AND 112 PER 2.11. ON DRAWING ONLY.
  3. CONSTRUCT PCC CURB DAMP PER DETAIL DRAWINGS CON AND CON1.
  4. CONSTRUCT A THICK PCC SIDEWALK CASE 3 PER C.S.TD PLAN NO. 111.
  5. CONSTRUCT A THIN PCC SIDEWALK APPROACH CASE 1 PER C.S.TD PLAN NO. 111.
  6. CONSTRUCT RILEY APPROACH PER C.S.TD PLAN NO. 111, ONE RAMP.
  7. PLACE WATER VALVE FRAME AND COVER TO PREVENT FLOOD.
  8. 2" COLD MILL AND OVERLAP COVER.
  9. PLACE 2" ASPHALT OVER 17" AC OVER 12" AL.

- DISPOSITION NOTES:**
- 1. PROTECT IN PLACE
  - 2. REMOVE BY OTHERS
  - 3. RELOCATE BY THIRD PARTY
  - 4. SEE ARCHITECT/ENGINEER OVERSIGHT

SCALE: 1" = 20'

CURVE NO.	R	Δ	T	L
1	15'	89°52'43"	14.97'	23.53'
2	30'	15°30'27"	4.76'	9.52'
3	30'	15°33'19"	4.78'	9.56'
4	25'	20°11'46"	5.78'	11.36'
5	25'	20°11'46"	5.78'	11.36'
6	15'	89°52'43"	14.97'	23.53'

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC

**NOTE:**

1. FOR LANDSCAPING, SEE LANDSCAPE PLANS.

**811** Underground Service Alert  
 of Southern California  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**

SCALE: 1" = 20'

PROTECT ALL EXISTING UTILITIES AND STRUCTURES. VERIFY ALL UTILITIES AND STRUCTURES BEFORE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE CITY OF ORANGE.

REVISIONS				REFERENCES						
NO.	DATE	REVISION	APPROVED	NO.	DATE	REFERENCE	APPROVED			
1	05/03/2016	ISSUED FOR CONSTRUCTION		1	05/03/2016	SECTION 102, 2015 ICD, AND 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	1	05/03/2016	ISSUED FOR CONSTRUCTION	

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 1000  
 DENVER, COLORADO 80202  
 TEL: 303.733.8000 FAX: 303.733.8001  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA

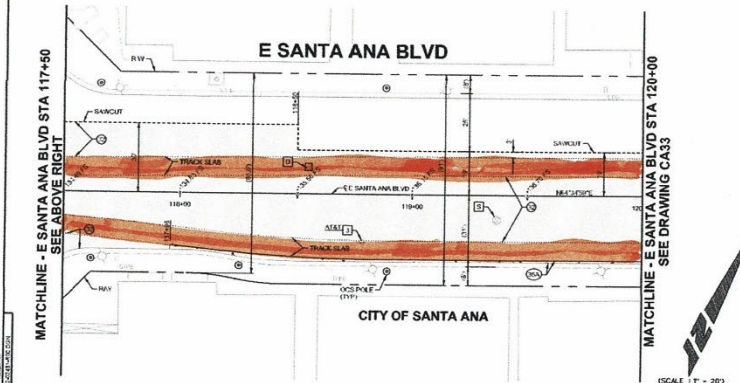
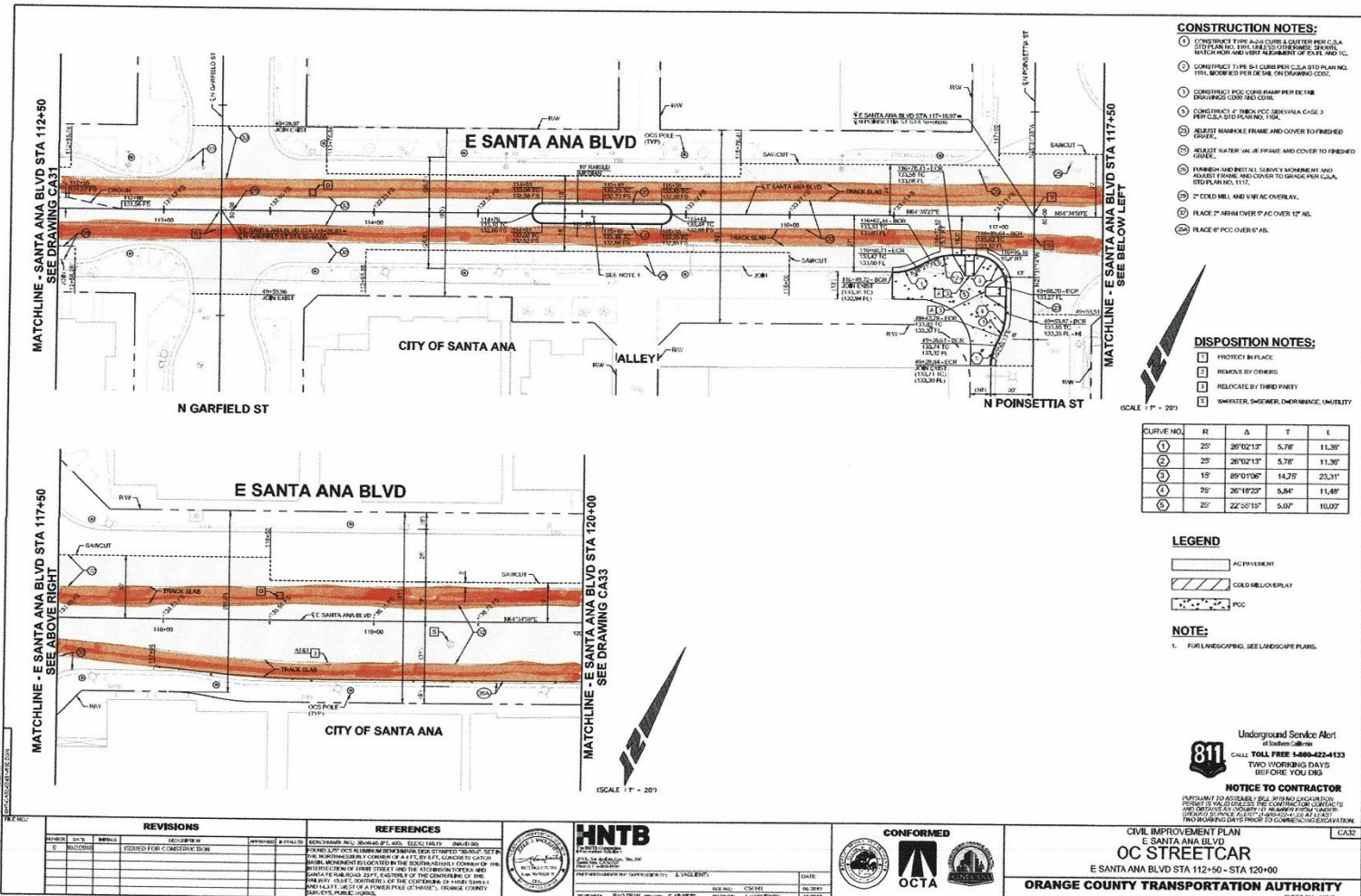
DATE: 05/03/2016  
 DRAWN BY: J. VAGNER  
 CHECKED BY: J. VAGNER  
 DESIGNED BY: J. VAGNER

CIVIL IMPROVEMENT PLAN  
 E SANTA ANA BLVD  
 OC STREETCAR  
 E SANTA ANA BLVD STA 102+50 - STA 112+50

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

CAS1  
 SHEET 288 of 1546

CITY OF SANTA ANA PROJECT NO. 17-8766-CJ OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
1. CONSTRUCT 12" CONC. CURB & GUTTER PER C.S.A. S&S PLAN NO. 117-50-10. SEE ALSO DRAWINGS: S&S AND T.C.
  2. CONSTRUCT 12" CONC. CURB PER C.S.A. S&S PLAN NO. 117-50-10 PER DETAIL ON DRAWING: C&G.
  3. CONSTRUCT 12" CONC. CURB RAMP PER DETAIL ON DRAWING: C&G R&D CURB.
  4. CONSTRUCT 12" CONC. SIDEWALK CASE 3 PER C.S.A. S&S PLAN NO. 117-50.
  5. ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  6. ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
  7. FINISH MANHOLE RINGS, SIDEWALK BARRIERS AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. S&S PLAN NO. 117-50.
  8. 2" COOL MILL AND 1/2" AC OVERLAY.
  9. PLACE 2" ASPH OVER 7" AC OVER 12".
  10. PLACE 8" PCC OVER 6" AS.

- DISPOSITION NOTES:**
- PROTECT BY PLACK
  - REMOVE BY OTHERS
  - RELOCATE BY THIRD PARTY
  - UNWATER, S&S, COVER, DRAINAGE, UTILITY

SCALE: 1" = 20'

CURVE NO.	R	Δ	T	L
1	25'	26°02'13"	5.76'	11.30'
2	25'	26°02'13"	5.76'	11.30'
3	15'	89°01'06"	14.75'	23.31'
4	25'	26°18'22"	5.84'	11.48'
5	25'	22°55'15"	5.07'	10.07'

- LEGEND**
- AC PAVEMENT
  - COOL MILL OVERLAY
  - PCC

**NOTE:**  
1. FOR LANDSCAPING, SEE LANDSCAPE PLAN.

Underground Service Alert  
at Southern California  
**811** CALLS TOLL FREE 1-800-422-4333  
TWO WORKING DAYS  
BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
PURSUANT TO AGREEMENT, ALL SHOWN ENGINEERING POINTS OF INTEREST ARE TO BE MAINTAINED AND PROTECTED BY CONTRACTOR. ALL NECESSARY PERMITS AND UTILITIES SHALL BE MAINTAINED AND PROTECTED BY CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	06/20/17	ISSUED FOR CONSTRUCTION			

**HNTB**  
HNTB CONSULTANTS, INC.  
1000 WEST 10TH AVENUE, SUITE 200  
DENVER, COLORADO 80202  
TELEPHONE: 303.733.4600 FAX: 303.733.4601  
WWW.HNTB.COM

**CONFORMED**

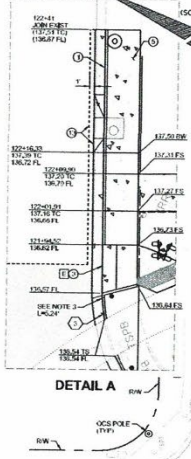
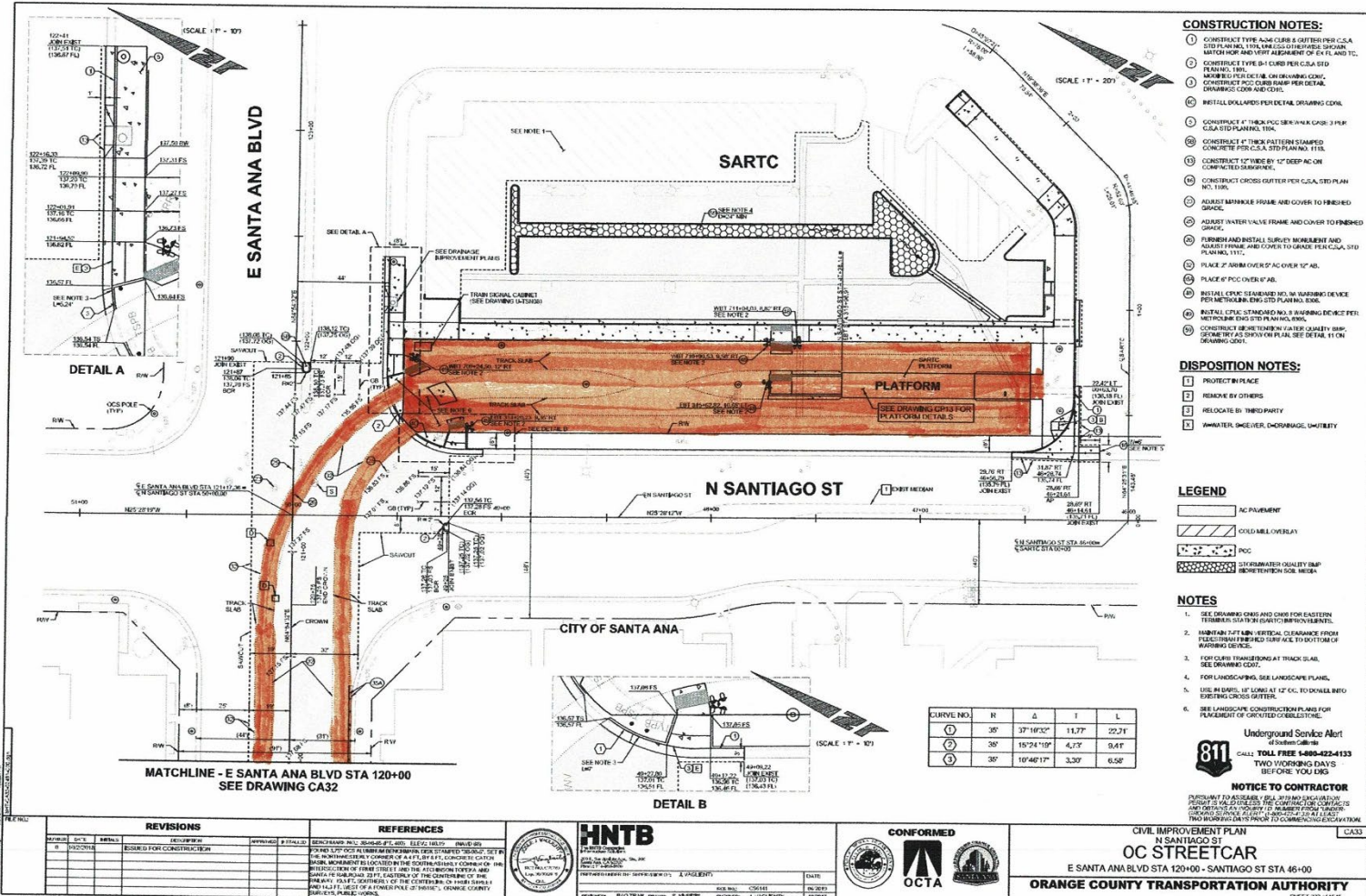
**OCTA**

CIVIL IMPROVEMENT PLAN  
E SANTA ANA BLVD  
**OC STREETCAR**  
E SANTA ANA BLVD STA 112+50 - STA 120+00

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

SHEET 231 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-8766-C1 OC STREETCAR FROM HARBOR BLVD TO SARTO



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE 4.5M CURB & GUTTER PER C.S.A. STD PLAN 104.1. THE CURB SHALL BE FINISHED TO MATCH HOPE AND LEFT ALIGNMENT OF EX FL AND TO PLANNED 100%.
  - CONSTRUCT TYPE 4.5M CURB PER C.S.A. STD PLAN 104.1. THE CURB SHALL BE FINISHED TO MATCH HOPE AND LEFT ALIGNMENT OF EX FL AND TO PLANNED 100%.
  - CONSTRUCT PCC CURB RAMP PER DETAIL DRAWING CON-001. FINISH TO MATCH HOPE AND LEFT ALIGNMENT OF EX FL AND TO PLANNED 100%.
  - INSTALL DOLLARDS PER DETAIL DRAWING CON-001.
  - CONSTRUCT 4" THICK PCC SLAB WITH A 3/8" CAS-3 PER C.S.A. STD PLAN 104.1.
  - CONSTRUCT 4" THICK PATTERNS STAMPED CONCRETE PER C.S.A. STD PLAN 111.1.
  - CONSTRUCT 12" WIDE BY 12" DEEP AC ON COMPLETELY FINISHED.
  - CONSTRUCT CROSS GUTTER PER C.S.A. STD PLAN NO. 110.1.
  - ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  - ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
  - TURNING AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD PLAN 111.1.
  - PLACE 4" ARMB COVER 2' AC OVER 12" AB.
  - PLACE 4" PCC OVER 12" AB.
  - INSTALL CURB (SEMI-FLEX) WITH WARNING DEVICE PER METRO-BUS STD PLAN NO. 800.
  - INSTALL CURB (STANDARD) WITH WARNING DEVICE PER METRO-BUS STD PLAN NO. 800.
  - CONSTRUCT 18" THICK 4" ASBESTOS CEMENT BOARD OVER 12" AB PER DETAIL 111.1 ON DRAWING CON-001.

- DISPOSITION NOTES:**
- PROTECT IN PLACE
  - REMOVE BY OTHERS
  - RELOCATE BY THIRD PARTY
  - WATER, SWEETER, DRAINAGE, UTILITY

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC
  - DIAPHRAGM WALL
  - DIAPHRAGM WALL WITH REINFORCING BARS

- NOTES**
- SEE DRAWING CMB AND CMB FOR EASTERN TRACKS STA 19+00 TO 19+20 IMPROVEMENTS.
  - INSTALL 8" RIB REINFORCING CLEARANCE FROM EXISTING FINISHED SURFACE TO BOTTOM OF WARNING DEVICE.
  - FOR CURB TRANSFERING AT TRACK SLAB, SEE DRAWING CON-001.
  - FOR LANDSCAPE, SEE LANDSCAPE PLAN.
  - USE 18" BARS AT 12" ON 12" TO DONOR EXISTING CROSS GUTTER.
  - SEE LANDSCAPE CONSTRUCTION PLAN FOR PLACEMENT OF CURB/VEGETATION.
- Underground Service Alert of Southern California  
**811** CALL TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG

**NOTICE TO CONTRACTOR**

PERMIT TO ACCESS: SEE PERMITS AND REGULATIONS FOR ACCESS TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATIONS.

REVISIONS			REFERENCES		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	10/20/2014	ISSUED FOR CONSTRUCTION			

**HNTB**

REGISTERED PROFESSIONAL ENGINEERS AND ARCHITECTS

1000 WEST 10TH AVENUE, SUITE 1000, ANAHEIM, CA 92801

PHONE: 714.771.1000 FAX: 714.771.1001

PROJECT NO. 15-0001 DATE: 10/20/14

DESIGNED BY: S. HARRIS CHECKED BY: J. HARRIS

**CONFORMED**

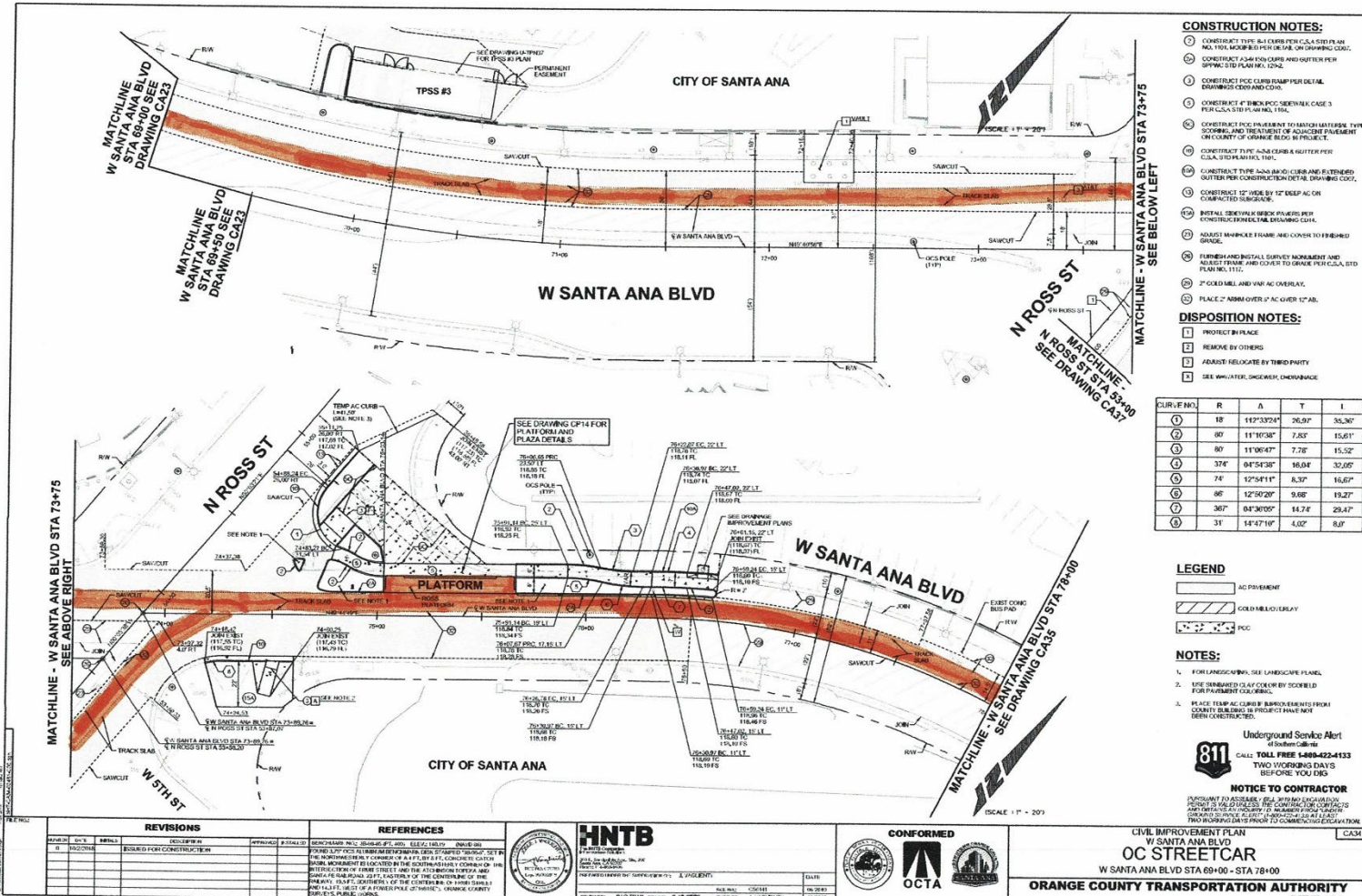
**OCTA**

CIVIL IMPROVEMENT PLAN  
 N SANTIAGO ST  
 OC STREETCAR  
 E SANTA ANA BLVD STA 120+00 - SANTIAGO ST STA 46+00

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

SHEET 222 OF 1645

CITY OF SANTA ANA PROJECT NO. 17-8766-C: OC STREETCAR FROM HARBOR BLVD TO SARTC



- CONSTRUCTION NOTES:**
- CONSTRUCT TYPE 3.4 CURBS PER C.S.A. STD PLAN AND THE SCHEDULED PER PLAN OR DRAWING CODE.
  - CONSTRUCT 3.4 IN CURBS AND SETTERS PER SPYING STD PLAN NO. 12-2.
  - CONSTRUCT POE CURB RAMP PER DETAIL DRAWINGS C00 AND C04.
  - CONSTRUCT 4" BENCH POE SIDEWALK CASE 3 PER C.S.A. STD PLAN NO. 11-4.
  - CONSTRUCT POE PARALLEL TO HARBOUR BLVD. TYPE, SCHEDULE AND TREATMENT OF ADJACENT PAVEMENT OR CURBS TO MATCH EXISTING.
  - CONSTRUCT TYPE 3.4 CURB AND SETTER PER C.S.A. STD PLAN NO. 11-4.
  - CONSTRUCT TYPE 3.4 IN CURB AND SETTING OUTER PER CONSTRUCTION DETAIL DRAWING CODE.
  - CONSTRUCT 12" WIDE BY 12" DEEP AC ON COMPACTED SUBGRADE.
  - INSTALL 600x100x100 BRICK PAVES PER CONSTRUCTION DETAIL DRAWING CODE.
  - ADJUST MANHOLE FRAME AND COVER TO FIT BENCH GRADE.
  - FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO BENCH PAVEMENT, STD PLAN NO. 11-7.
  - 2" COB BLEND AND 1/4" AC OVERLAY.
  - PAVE 2" ASPH OVER 1" AC OVER 12" AB.
- DISPOSITION NOTES:**
- PROTECT BY FENCE
  - REMOVE BY OTHERS
  - ADJUST RELocate BY THIRD PARTY
  - SEE MANHOLE, UNDERPASS, OVERPASS

CURVE NO.	R	Δ	T	L
1	18	112°33'04"	36.97'	35.36'
2	80	111°03'38"	7.83'	15.61'
3	80	111°06'47"	7.76'	15.52'
4	374	04°54'38"	18.04'	32.65'
5	74	12°54'11"	8.37'	16.67'
6	86	12°50'20"	9.68'	19.27'
7	367	04°30'05"	14.74'	29.47'
8	31	14°47'10"	4.02'	8.07'

- LEGEND**
- AC PAVEMENT
  - COLD MILLS/LEAVE
  - POE
- NOTES:**
- FOR LANDSCAPING, SEE LANDSCAPE PLAN.
  - USE UNIMPAVED CLAY COLOR BY SCORED FOR PAVEMENT COORDINATION.
  - PLACE TEMP AC CURB & SUBROUMENTS FROM COUNTY BUILDING DEPARTMENT PROJECT HAVE NOT BEEN CONSTRUCTED.

Underground Service Alert  
 811  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PAYMENT TO ASSUREE SHALL BE NO EXCEEDING FORTY (40) DAYS AFTER THE CONTRACTOR HAS COMPLETED ALL WORK AND THE ASSUREE HAS RECEIVED ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE COUNTY OF ORANGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE COUNTY OF ORANGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF SANTA ANA AND THE COUNTY OF ORANGE.

NO.	DATE	REVISIONS	APPROVED	BY
1	08/20/2017	ISSUED FOR CONSTRUCTION		

**REFERENCES**

ORANGE COUNTY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2015 EDITION

**HNTB**  
 HNTB CONSULTANTS, INC.  
 10000 WEST 15TH AVENUE, SUITE 100  
 DENVER, COLORADO 80202

DESIGNED: SHU FANG CHANG, S. HARRIS  
 CHECKED: J. ANDERSON  
 DATE: 08/20/17

**CONFORMED**

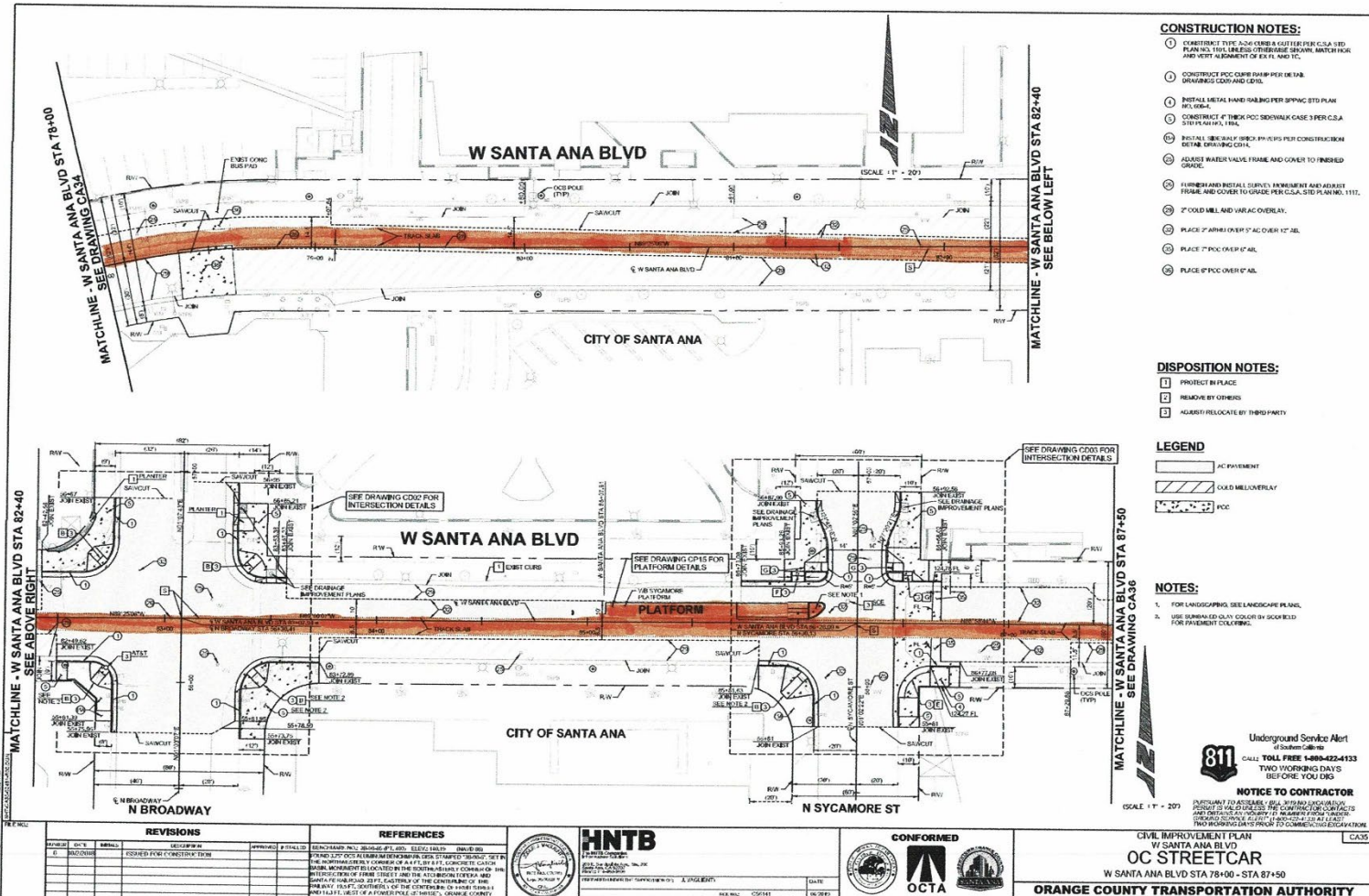
**OCTA**  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN  
 W SANTA ANA BLVD  
 OC STREETCAR  
 W SANTA ANA BLVD STA 69+00 - STA 78+00

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

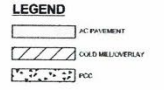
CAS4  
 SHEET 233 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-5766-C7 OC STREETCAR FROM HARBOR BLVD TO SARTY



- CONSTRUCTION NOTES:**
1. CONSTRUCT TYPE 2.5-4 CURB & GUTTER PER C.S.A. STD. PLAN NO. 1101, UNLESS OTHERWISE SHOWN. MATCH FOR HORIZ. AND VERT. ALIGNMENT OF EX. FL. AND TC.
  2. CONSTRUCT PCC CURB DAMP PER DETAIL DRAWING C001 AND L010.
  3. INSTALL METAL HAND RAILING PER SPAC. STD. PLAN NO. 1104.
  4. CONSTRUCT 4" THICK PCC SIDEWALK CASE 3 PER C.S.A. STD. PLAN NO. 1104.
  5. INSTALL 3" BARS ONLY UNDER PAVEMENT PER CONSTRUCTION DETAIL DRAWING C014.
  6. ADJUST WALKER VALVE FRAME AND COVER TO FINISHED GRADE.
  7. FURNISH AND INSTALL SURVEIL INSTRUMENT AND ADJUST INSTR. AND COVER TO GRADE PER C.S.A. STD. PLAN NO. 1112.
  8. 2" COLD MILL AND UNRAC OVERLAY.
  9. PLACE 2" ASPH. OVER 5" AC OVER 12" JEL.
  10. PLACE 7" PCC OVER 6" ASL.
  11. PLACE 8" PCC OVER 6" ASL.

- DISPOSITION NOTES:**
1. PROTECT IN PLACE
  2. REMOVE BY OTHERS
  3. ADJUST/RELOCATE BY THIRD PARTY



- NOTES:**
1. FOR LANDSCAPING, SEE LANDSCAPE PLAN.
  2. USE BURNED ORALY COLOR BY SPECIFIED FOR PAVEMENT COLORING.

Underground Service Alert  
 of Southern California  
**811** CALL TOLL FREE 1-800-422-4333  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PARTISAN TO ASSEMBLY BILL 680 AND EXECUTIVE  
 ORDER 22-001-000001, THE CONTRACTING CONTACTS  
 AND THE PUBLIC ACCOUNTANTS' BOARD FROM THESE  
 GEORGE KENNEDY ELECTRIC CONTRACTORS AT LEAST  
 TWO WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.

NO.	DATE	REVISIONS	APPROVED	DESIGNED	DRAWN
1	08/15/2024	ISSUED FOR CONSTRUCTION			

**REFERENCES**

SECTION 05100 - FINISHES  
 PART 05100 - FINISHES  
 05100-01 - FINISHES  
 05100-02 - FINISHES  
 05100-03 - FINISHES  
 05100-04 - FINISHES  
 05100-05 - FINISHES  
 05100-06 - FINISHES  
 05100-07 - FINISHES  
 05100-08 - FINISHES  
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 05100-16 - FINISHES  
 05100-17 - FINISHES  
 05100-18 - FINISHES  
 05100-19 - FINISHES  
 05100-20 - FINISHES

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 1000  
 DENVER, COLORADO 80202  
 TEL: 303.733.4000  
 FAX: 303.733.4001  
 WWW.HNTB.COM

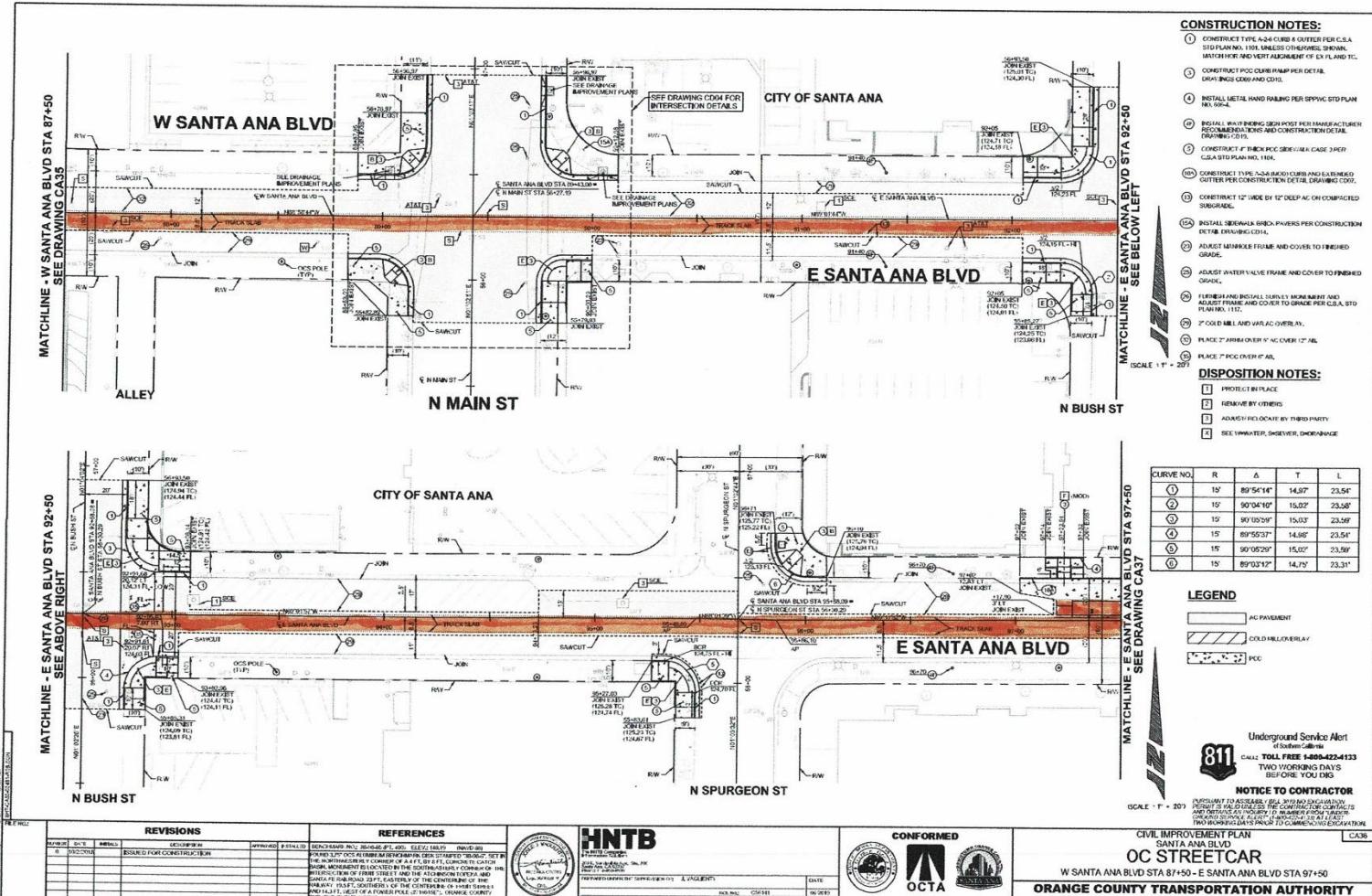
**CONFORMED**  
 OCTA  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

CIVIL IMPROVEMENT PLAN  
 W SANTA ANA BLVD  
 OC STREETCAR  
 W SANTA ANA BLVD STA 78+00 - STA 87+50

**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 234 OF 1545

CITY OF SANTA ANA PROJECT NO. 17-8766-C1 OC STREETCAR FROM HARBOR BLVD TO SARTO





**CONSTRUCTION NOTES:**

1. CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 110, UNLESS OTHERWISE SHOWN. MATCH HOR AND VERT ADJUSTMENT OF EX FL AND TIC.
2. CONSTRUCT PCC CURB RAMP PER DETAIL. DRIP-EDGE CORNER AND CURB.
3. INSTALL METAL HAND RAILING PER SPVVC STD PLAN 104, 105&A.
4. INSTALL 8" X 16" TIMBER GRIP PILES PER MANUFACTURER'S RECOMMENDATIONS AND CONSTRUCTION DETAIL DRAWING C014.
5. CONSTRUCT 4" BENCH PCC DRIVEWAY CASE 3-SHET. C.S.A. STD PLAN NO. 110A.
6. CONSTRUCT TYPE A-24 BUSH CURB AND BUSHED GUTTER PER CONSTRUCTION DETAIL DRAWING C007.
7. CONSTRUCT 12" UNDE 12" DEEP AC ON COMPACTED SUBGRADE.
8. INSTALL SEWER/VA GREN PIPERS PER CONSTRUCTION DETAIL DRAWING C014.
9. ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
10. ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
11. FURNISH AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO GRADE PER C.S.A. STD PLAN NO. 110.
12. 2" COLD MILL AND 1/2" AC OVERLAY.
13. PLACE 2" AIR OVER 1/2" AC OVER 12" A/L.
14. PLACE 2" PCC OVER 1/2" A/L.

**DISPOSITION NOTES:**

- 1. PROTECT BY PLACE
- 2. REMOVE BY OTHERS
- 3. ADJUST BY LOCATE BY THIRD PARTY
- 4. SEE 11000-101, 010-010, 010-010

CURVE NO.	R	Δ	T	L
1	15'	89°54'14"	14.97'	23.54'
2	15'	90°04'16"	15.02'	23.26'
3	15'	90°03'29"	15.03'	23.29'
4	15'	89°55'31"	14.96'	23.51'
5	15'	90°05'29"	15.02'	23.29'
6	15'	89°02'12"	14.79'	23.21'

**LEGEND**

- AC PAVEMENT
- COLD MILL OVERLAY
- PCC

Underground Service Alert  
 of Southern California  
**811**  
 CALL TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PREPARED TO ASSEMBLY. SEE 11000-101 FOR EXPLANATION. APPROVED TO PROCEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND UTILITIES.

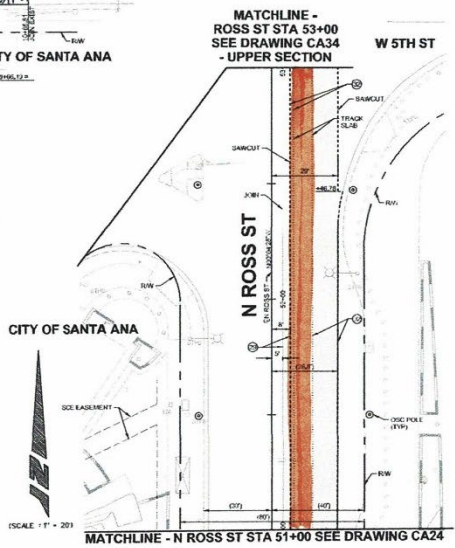
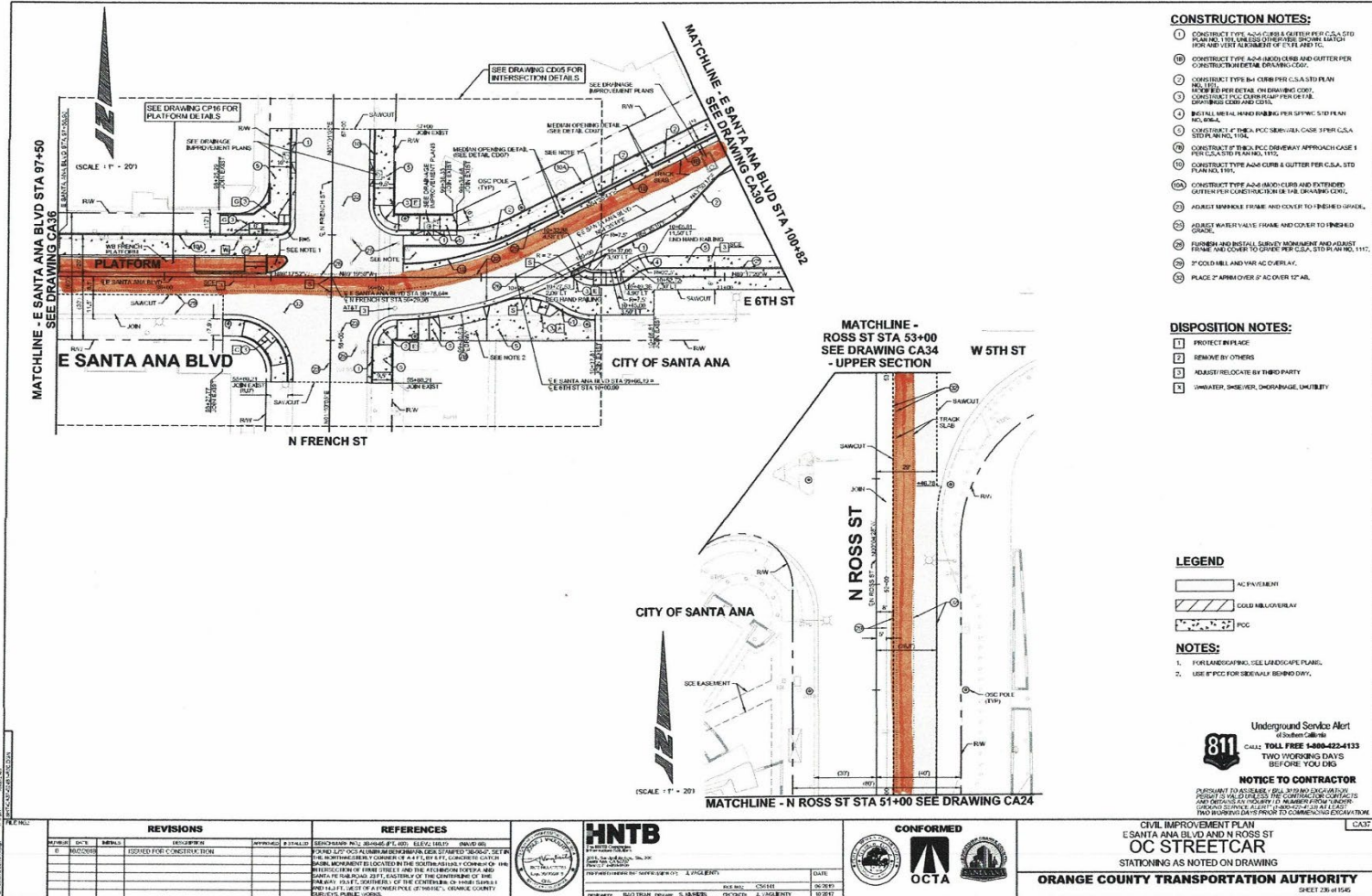
REVISIONS		REFERENCES	
NO.	DATE	BY	DESCRIPTION

**HNTB**  
 HNTB CONSULTANTS, INC.  
 10000 WEST 16TH AVENUE, SUITE 100  
 DENVER, COLORADO 80202  
 PHONE: 303.733.1100 FAX: 303.733.1101  
 WWW.HNTB.COM

**CONFORMED**  
 OCTA

CIVIL IMPROVEMENT PLAN  
 SANTA ANA BLVD  
**OC STREETCAR**  
 W SANTA ANA BLVD STA 87+50 - E SANTA ANA BLVD STA 97+50  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 226 of 146

CITY OF SANTA ANA PROJECT NO. 17-8765-C: OC STREETCAR FROM HARBOR BLVD TO SARTIC



- CONSTRUCTION NOTES:**
1. CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 118 UNLESS OTHERWISE SHOWN. MATCH FOR AND SET ELEVATION OF CURB AND GUT.
  2. CONSTRUCT TYPE A-24 (M-20) CURB AND GUTTER PER C.S.A. STD PLAN NO. 118 UNLESS OTHERWISE SHOWN.
  3. CONSTRUCT TYPE B-4 CURB PER C.S.A. STD PLAN NO. 118 UNLESS OTHERWISE SHOWN.
  4. CONSTRUCT TYPE C-1 CURB PER C.S.A. STD PLAN NO. 118 UNLESS OTHERWISE SHOWN.
  5. CONSTRUCT TYPE A-24 CURB & GUTTER PER C.S.A. STD PLAN NO. 118.
  6. CONSTRUCT TYPE A-24 (M-20) CURB AND GUTTER PER C.S.A. STD PLAN NO. 118.
  7. CONSTRUCT TYPE A-24 (M-20) CURB AND EXTENDED GUTTER PER C.S.A. STD PLAN NO. 118.
  8. ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE.
  9. ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE.
  10. FLOOR AND INSTALL SURVEY MONUMENT AND ADJUST FRAME AND COVER TO COVER PER C.S.A. STD PLAN NO. 118.
  11. 3" O.D. HUB AND VAC AC OVER A.Y.
  12. PLACE 2" ASPHALT OVER 2" AC OVER 12" AB.

- DISPOSITION NOTES:**
1. PROTECT EXISTING.
  2. EXAMINE BY OTHERS.
  3. REVISIONS BY OTHERS.
  4. UNAPPROVED, UNDESIGNED, UNLIT.

- LEGEND**
- AC PAVEMENT
  - COLD MILL OVERLAY
  - PCC
- NOTES:**
1. FOR LANDSCAPING, SEE LANDSCAPE PLAN.
  2. USE 8" PCC FOR SIDEWALK BEHIND DAY.

Underground Service Alert  
 811  
 CALL TOLL FREE 1-800-425-4133  
 TWO WORKING DAYS  
 BEFORE YOU DIG

**NOTICE TO CONTRACTOR**  
 PURSUANT TO AGREEMENT, ALL DESIGN INFORMATION, PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS, AND DATA IS THE PROPERTY OF ORANGE COUNTY TRANSPORTATION AUTHORITY. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION.

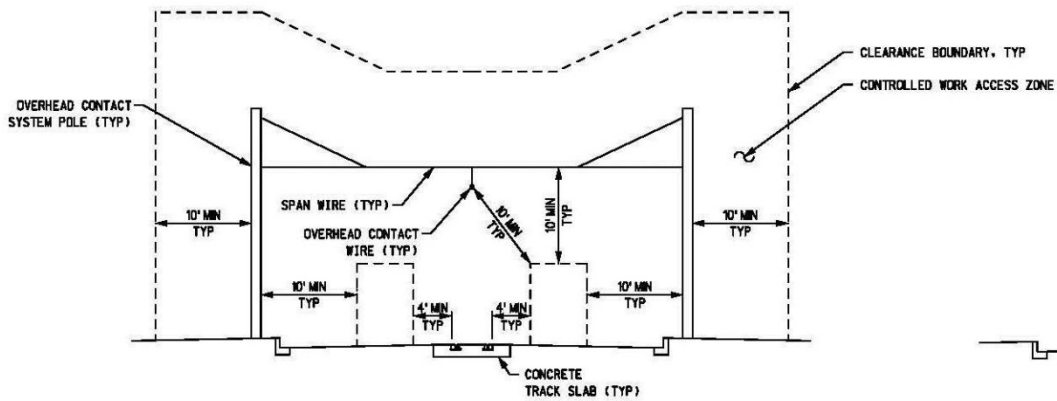
REVISIONS		REFERENCES	
NO.	DATE	BY	DESCRIPTION

**HNTB**  
 HNTB CONSULTANTS, INC.  
 1000 WEST 10TH AVENUE, SUITE 1000  
 DENVER, COLORADO 80202  
 PHONE: 303.733.4400  
 FAX: 303.733.4401  
 WWW.HNTB.COM

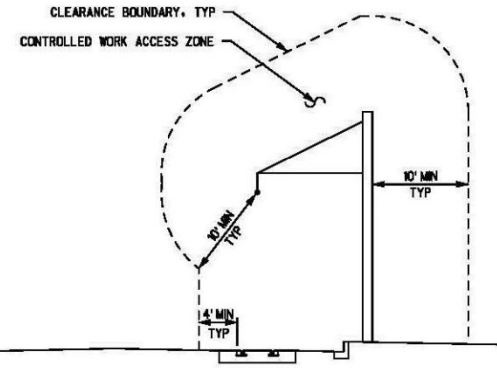
**CONFORMED**  
  
**OCTA**  
 ORANGE COUNTY TRANSPORTATION AUTHORITY

**CIVIL IMPROVEMENT PLAN**  
 E SANTA ANA BLVD AND N ROSS ST  
**OC STREETCAR**  
 STATIONING AS NOTED ON DRAWING  
**ORANGE COUNTY TRANSPORTATION AUTHORITY**  
 SHEET 236 of 1546

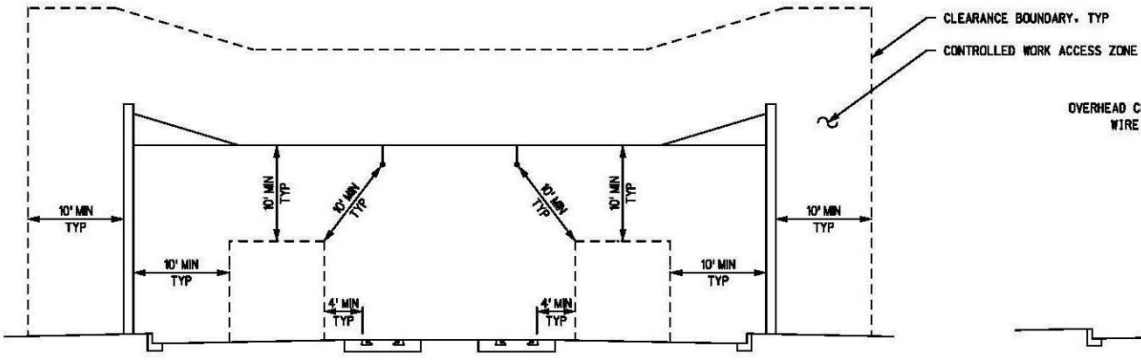
CITY OF SANTA ANA PROJECT NO. 17-5766-C7 OC STREETCAR FROM HARBOR BLVD TO BART



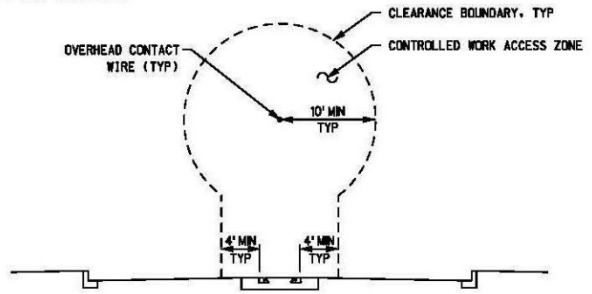
**SINGLE TRACK SPAN WIRE SECTION**  
SANTA ANA BLVD (PARTON ST TO MORTIMER ST)



**SINGLE TRACK CANTILEVER OCS SECTION**  
4TH STREET (ROSS ST TO MORTIMER ST)  
MORTIMER STREET (4TH ST TO SANTA ANA BLVD)



**DOUBLE TRACK SPAN WIRE SECTION**  
SANTA ANA BLVD (RAITT ST TO PARTON ST)  
SANTA ANA BLVD (MORTIMER ST TO SANTIAGO ST)



**SINGLE TRACK MID SPAN WIRE SECTION**

**NOTES:**

1. THE DC STREETCAR CONTROLLED WORK ACCESS ZONE IS THE AREA WITHIN CITY ROW INCLUDING ALL TRACK (SINGLE AND DOUBLE) AND THE SPACE EXTENDING FOUR (4) FEET BEYOND THE FARTHEST RAIL, ANY PORTION OF A STREETCAR STOP, AND TEN (10) FEET FROM THE OVERHEAD CONTACT SYSTEM (OCS). THE GRAPHICS ARE INTENDED TO REPRESENT THIS DEFINITION.
2. THE FIGURES DEPICTED ARE FOR GENERAL REFERENCE - SEE NOTE 1 FOR CLEARANCE REQUIREMENT.

**FIGURE 2**  
**CONTROLLED WORK ACCESS ZONE**  
NOT TO SCALE