CITY OF TORRANCE

CONSTRUCTION PLANS
FOR
190TH STREET REHABILITATION, T-130

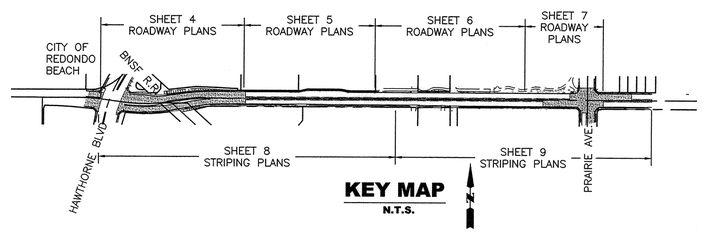
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

SHEET INDEX:

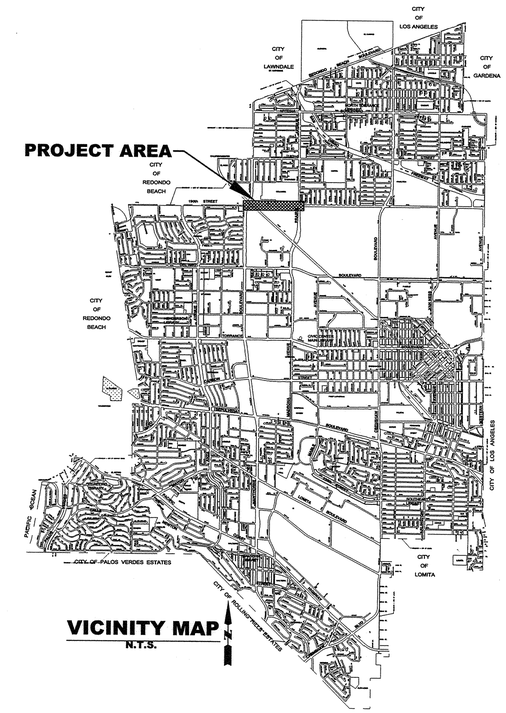
SHEET NO.	COT PLAN NO.	DESCRIPTION
1	ST – 1063	TITLE SHEET
2	ST – 1063	TYPICAL SECTIONS & CONSTRUCTION NOTES
3	ST – 1063	CONSTRUCTION DETAILS
4–7	ST – 1063	ROADWAY PLAN & PROFILE
8–9	C–81–127A	SIGNING & STRIPING PLANS
10	TS90–241A	TRAFFIC SIGNAL MODIFICATION PLANS
11–15	ST–1063	TRAFFIC CONTROL PLANS

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK), 2009 EDITION AND SUPPLEMENTS THERETO, AS WRITTEN AND PROMULGATED BY PUBLIC WORKS LATEST, INC., HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS, THE LATEST CITY OF TORRANCE STANDARD PLANS, THE LATEST CALTRANS STANDARDS AND SPECIFICATIONS, AND TO THE SATISFACTION OF THE ENGINEER.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, VERIFY DEPTH AND PROTECT ALL STRUCTURES, INCLUDING SUBSTRUCTURES, SHOWN AND NOT SHOWN ON THE PLAN. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPAIRING OR REPLACING ANY OF SAID STRUCTURES DAMAGED BY HIM/HER DURING PROSECUTION OF THE WORK. ALL REPAIRS AND REPLACEMENTS SHALL BE DONE IN THE PRESENCE OF THE INSPECTOR. ALL LOCATIONS SHOWN ON THE PLAN FOR UTILITY LINES HAVE BEEN TAKEN FROM AVAILABLE RECORDS AND THEIR COMPLETENESS AND CORRECTNESS ARE IN NO WAY GUARANTEED.
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1–800–227–2800 AND ALL PUBLIC UTILITY COMPANIES AND OWNERS OF PRIVATE FACILITIES WITHIN THE AREA OF CONSTRUCTION AT LEAST TWO WORKING DAYS IN ADVANCE OF PERFORMING ANY WORK WITHIN SAID AREA.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT BEFORE COMMENCING WORK. TRAFFIC CONTROL WITHIN PUBLIC STREET RIGHTS OF WAY SHALL BE IN CONFORMANCE WITH THE PROVIDED TRAFFIC CONTROL PLANS AND "CAMUTCD MANUAL" LATEST EDITION. THE CONTRACTOR SHALL PROVIDE A 24–HOUR TELEPHONE NUMBER FOR EMERGENCY REPAIRS TO TRAFFIC CONTROL AND PAVEMENT MARKINGS.
5. OVERHEAD UTILITY LINE CAUTION: REVIEW APPROVED CONSTRUCTION PLAN. IF CONSTRUCTION REQUIRES WORKERS AND/OR EQUIPMENT TO BE WITHIN 6 FEET OR CRANES OR HOISTING DEVICES TO BE WITHIN 10 FEET OF OVERHEAD ELECTRIC/UTILITY LINES, CALL SOUTHERN CALIFORNIA EDISON CO. AT 310–783–9336.
6. PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.
7. GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR 24 HRS PRIOR TO COMMENCEMENT OF WORK.
8. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT 310–781–6900 PRIOR TO TRIMMING, REMOVING OR RELOCATING ANY EXISTING STREET TREES.
9. UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS SHALL BE RELOCATED OR REMOVED BY THE CONTRACTOR.
10. IF STREET TREES ARE REQUIRED IN THE PARKWAY, NEWLY INSTALLED TREES SHALL BE INSTALLED PER CITY OF TORRANCE STANDARD T401 AND TO THE SATISFACTION OF THE STREETSCAPE MANAGER. CONTACT THE PUBLIC WORKS DEPARTMENT AT 310–781–6900 FOR TYPE(S), SIZE(S) AND LOCATION(S) OF TREES.
11. PLANTED AND IRRIGATED PARKWAY(S) (IF REQUIRED) SHALL HAVE MATERIALS AND PLANTS APPROVED BY THE STREETSCAPE MANAGER PRIOR TO INSTALLATION.
12. CRUSHED MISCELLANEOUS BASE (CMB) PER SECTION 200–2.4 OF THE STANDARD SPECIFICATIONS SHALL BE USED FOR ALL BASE MATERIAL.
13. DURING NON–CONSTRUCTION HOURS, ALL EXCAVATIONS MUST BE APPROPRIATELY SHORED AND PLATED OR BACKFILLED, EXCEPT BORE PITS WHICH SHALL BE SECURED WITH K–RAIL AND 6' HIGH CHAIN LINK FENCE PANELS SECURED IN PLACE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR OR ENGINEER. PLATES SHALL BE TACK WELDED, PINNED AND/OR SECURED IN PLACE BY ANOTHER METHOD APPROVED BY THE INSPECTOR OR ENGINEER.
14. THE CONTRACTOR SHALL MAKE AVAILABLE FOR THE INSPECTOR'S REVIEW, ON A DAILY BASIS, AS–BUILT DRAWINGS FOR WORK PERFORMED UP TO AND INCLUDING THE PREVIOUS DAY'S ACTIVITIES. WORK SHALL NOT BE CONSIDERED AS COMPLETE UNTIL AS–BUILT DRAWINGS ARE SUBMITTED TO AND ACCEPTED BY THE COMMUNITY DEVELOPMENT OR PUBLIC WORKS DIRECTOR.
15. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS AND SITE CONDITIONS PRIOR TO COMMENCING WORK.
16. SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK IN QUESTION.



KEY MAP
N.T.S.



VICINITY MAP
N.T.S.

ABBREVIATIONS

AB	AGGREGATE BASE	INT	INTERSECTION
AC	ASPHALT CONCRETE	INV	INVERT
AVE.	AVENUE	IRR	IRRIGATION
BC	BEGIN CURVE	LD	LOCAL DEPRESSION
BCR	BEGIN CURB RETURN	MH	MANHOLE
BW	BACK OF WALK	NIC	NOT IN CONTRACT
C&G	CURB AND GUTTER	NTS	NOT TO SCALE
CATV	CABLE T.V. CONDUIT	O.C.	ON CENTER
CB	CATCH BASIN	PB	PULL BOX
CF	CURB FACE	PCC	PORTLAND CEMENT CONCRETE
CL	CENTERLINE	PI	POINT OF INTERSECTION
COND	CONDUIT	PL	PROPERTY/LOT LINE
CP	CATHODIC PROTECTION	POC	POINT ON CURVE
CPB	CABLE TV PULL BOX	POT	POINT OF TANGENT
CMP	CORRUGATED METAL PIPE	PP	POWER POLE
CTV	CABLE TELEVISION	PRC	POINT OF REVERSE CURVE
DWY	DRIVEWAY	PVI	POINT OF VERTICAL INTERSECTION
DW	DOMESTIC WATER	R	RADIUS
ELEC	ELECTRIC	R/W	RIGHT OF WAY
EASE	EASEMENT	RCP	REINFORCED CONCRETE PIPE
EC	END CURVE	S	SEWER
ECR	END CURB RETURN	SB	SOUTHBOUND
EHH	ELECTRIC HANDHOLE	SD	STORM DRAIN
EM	ELECTRIC METER	SL	STREET LIGHT
EMH	EDISON MANHOLE	SMH	SEWER MANHOLE
EP	EDGE OF PAVEMENT	SP	SIGN POST
ETW	EDGE OF TRAVELLED WAY	ST	STREET
EVC	END VERTICAL CURVE	SW	SIDEWALK
EXIST	EXISTING	SWR	SEWER
FG	FINISH GRADE	T	TELEPHONE
FH	FIRE HYDRANT	TS	TRAFFIC SIGNAL
FL	FLOW LINE	TC	TOP OF CURB
FS	FINISH SURFACE	T.B.D.	TO BE DETERMINED
G	GAS	TRHH	TRAFFIC HAND HOLE
GB	GRADE BREAK	V	VALVE
GM	GAS METER/SERVICE	VAR	VARIES
GV	GAS VALVE	VLT	VAULT
GW	GUYWIRE	WV	WATER VALVE
		WCR	WHEEL CHAIR RAMP

STANDARD DRAWINGS

CITY OF TORRANCE (LATEST EDITION)

T103–2	TYPICAL SECTION – COLLECTOR & ARTERIAL STREET (SIDEWALK)
T105	RADIUS DRIVEWAY WITH DEPRESSED SIDEWALK
T115	DOWELS AT EXPANSION JOINTS
T1004	ARTERIAL & COLLECTOR RIGHT LANE CLOSURE
T1011	RIGHT LANE CLOSURE FOR WORK BEYOND INTERSECTION
T1013	ARTERIAL & COLLECTOR STREET RIGHT TURN LANE CLOSURE

SPPWC (2009 EDITION)

111–4	CURB RAMP
120–2	CURB & GUTTER – BARRIER
150–3	CURB DRAIN
606–3	METAL HAND RAILINGS

CALTRANS (LATEST EDITION)

A20A–D	PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS
A24A	PAVEMENT MARKINGS ARROWS
A24B	PAVEMENT MARKINGS ARROWS AND SYMBOLS
A24C	PAVEMENT MARKINGS SYMBOLS AND NUMERALS
A24D	PAVEMENT MARKINGS WORDS
A24E	PAVEMENT MARKINGS WORDS AND CROSSWALKS

HATCH/LEGEND

○	MANHOLE	—☼—	EXISTING STREET LIGHT
⊗	CLEANOUT OR VALVE	—E—	EXISTING ELECTRIC CONDUIT (SCE)
□	VAULT OR PULLBOX	—G—	EXISTING GAS LINE (SCG)
▫	METER	—RW—	EXISTING RECLAIMED WATER LINE
	FIRE HYDRANT	—S—	EXISTING SEWER LINE
TS	TRAFFIC SIGNAL PULL BOX	—T—	EXISTING TELEPHONE CONDUIT (AT&T)
— — —	RIGHT OF WAY	—W—	EXISTING WATER LINE
— — —	PROPERTY LINE	—IRR—	EXISTING IRRIGATION LINE
═══	PROPOSED CURB & GUTTER		
=======	EXISTING CURB & GUTTER		
———	LIMITS OF WORK		
⊤	SIGN		

UTILITY CONTACT LIST

COMPANY	CONTACT	PHONE NUMBER
BP Pipelines	Rob Streed	(714) 228–6526
Chevron Pipeline Co.	Al Super	(714) 228–1506
Crimson Pipeline Lp	Cordelia Cisneros	(562) 285–4133
CA Water Service/Dominguez Wtr Co	Dan Trejo	(310) 257–1400
AT&T Distribution	Michael Jefferson	(310) 515–4099
MCI (Verizon Business)	John Bachelder	(972) 729–6322
Plains All American Pipeline	George Gooch	(562) 728–2325
SCE Telecommunications	Eric Lopez	(626) 422–9256
SCE – Transmission	Kim Grule	(714) 796–9932
SC Gas	Phil Jenks	(310) 687–2023
SC Gas – Transmission	––	(805) 208–1845
Shell Oil Pipeline	Utility Coordinator	(310) 816–2063
Time Warner Cable	Cary Hanson	(424) 212–6961
Verizon	Dave Larus	(760) 365–1823
West Basin Municipal Water District	David Delsigne	(310) 978–4303
Exxon Mobil Pipeline Co	Teri Shinde	(310) 212–1794

Underground Service Alert
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REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT
190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE
TITLE SHEET

BENCHMARK:
DEPARTMENT OF PUBLIC WORKS BENCHMARK TAG SOUTH CURB, 900MM WEST OF BCR @ SOUTHWEST CORNER OF TORRANCE BLVD AND HAWTHORNE BLVD. 25.6M WEST AND 17.4M SOUTH OF CENTERLINE INTERSECTION.

NAME:	ELEV. (FT)	ADJUSTMENT
Y 10263	110.423	2000

(TORRANCE QUAD BOOK)

BASIS OF COORDINATES:
THE BASIS OF BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN NGS DY1217 AND NGS DY2032 BEING N 78°50'33" E AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY.
NGS DY1217 N= 1,756,746.96 E= 6,443,217.91 C.F.= 1.00005334
NGS DY2032 N= 1,764,354.38 E= 6,481,788.17 C.F.= 1.00004744

PLANS PREPARED BY:
ONWARD ENGINEERING

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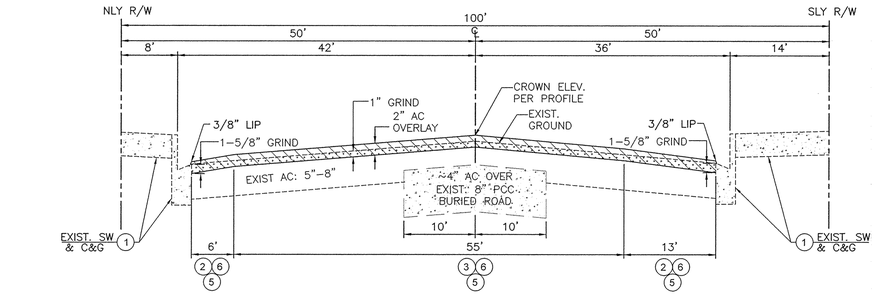
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
P: (714) 533-3050
F: (714) 808-1270
STEVE J. HOSFORD, PE, CE42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER
STEVE J. HOSFORD
No. 42280
CIVIL
STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER:
DAVINA BUENAVISTA — 3/18/14 DATE

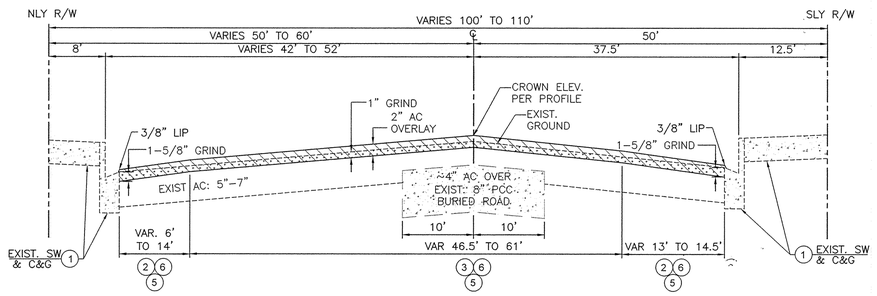
APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: NO SCALE
SHEET 1 OF 15
PLAN NO.
ST-1063



TYPICAL SECTION: 190TH STREET

STA 18+52.37 TO STA 21+85.22
N.T.S.



TYPICAL SECTION: 190TH STREET

STA 21+85.22 TO 25+00
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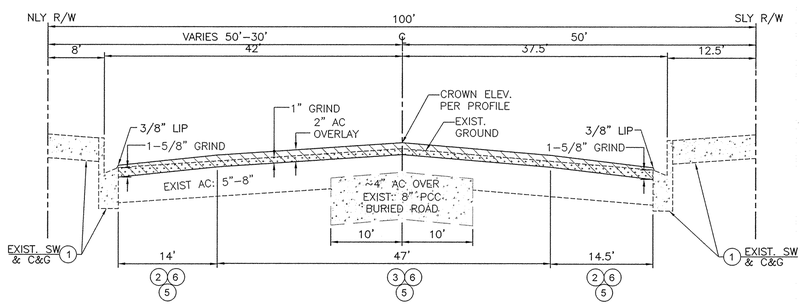

TYPICAL SECTION: 190TH STREET

STA 25+00 TO STA 29+38.35
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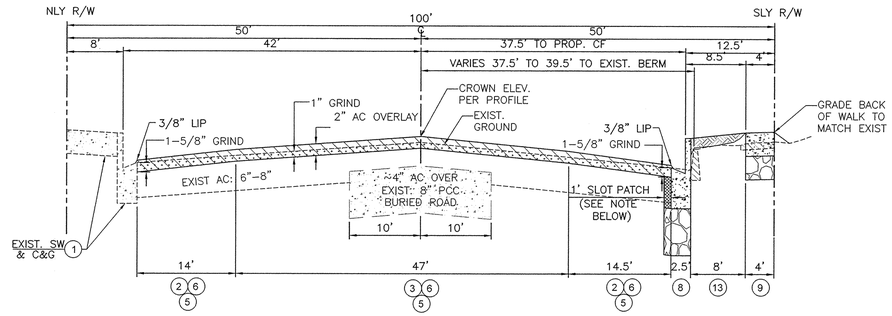
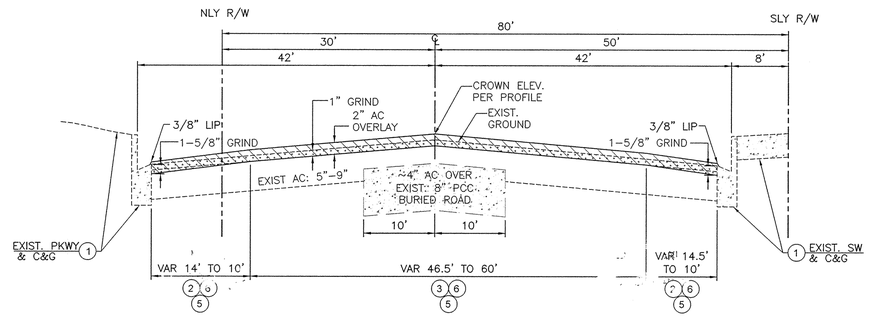


TYPICAL SECTION: 190TH STREET

STA 29+38.35 TO STA 31+19.56
N.T.S.

NOTE: 1' WIDE 5-1/2" THICK CLASS 100-E-100 CONCRETE ON 8" CMB TO BE USED ON ALL SLOT PATCH



TYPICAL SECTION: 190TH STREET

STA 31+19.56 TO STA 37+07.51
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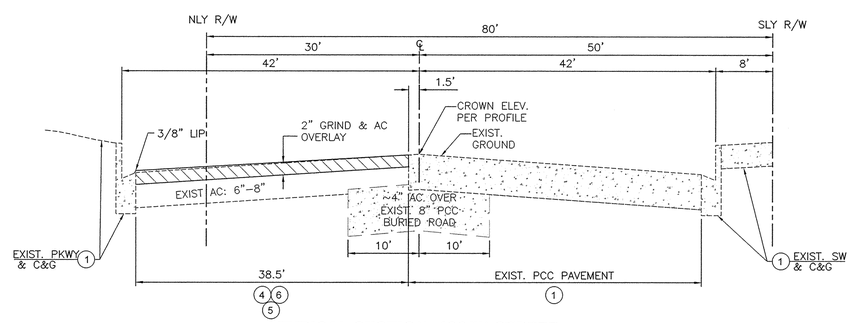

TYPICAL SECTION: 190TH STREET

STA 37+07.51 TO STA 38+72.84
N.T.S.

CONSTRUCTION NOTES

1. PROTECT IN PLACE
2. EDGE MILL EXIST. AC PAVEMENT 1"-1½" VARIABLE DEPTH PER TYPICAL SECTION, SHEET 2. WIDTH VARIES PER PLAN.
3. COLD MILL EXIST. AC PAVEMENT 1" UNIFORM DEPTH PER TYPICAL SECTION.
4. COLD MILL EXIST. AC PAVEMENT 2" UNIFORM DEPTH PER TYPICAL SECTION.
5. FOLLOWING AC PAVEMENT GRINDING, FOR LOCALIZED AC PAVEMENT REPAIRS ("DIGOUTS"), SAWCUT, REMOVE & DISPOSE EXIST. STRUCTURAL SECTION AND UNCLASSIFIED MATERIAL TO A DEPTH OF 10". CONSTRUCT 4" AC ON 6" CMB PER DETAIL F, SHEET 3. (LOCATIONS TBD IN FIELD BY ENGINEER)
6. CONSTRUCT 2" AC (C2-PG 64-10) OVERLAY PER TYPICAL SECTION
7. REMOVE EXIST. & INSTALL NEW CURB RAMP PER SPPWC STD. PLAN NO. 111-4 CASE A, TYPE 1 OR 2 & DETAILS ON SHEET 3.
8. REMOVE EXIST. AC CURB & CONSTRUCT NEW TYPE A2-8 CURB & GUTTER PER SPPWC STD. PLAN NO. 120-2 ON 8" CMB.
9. REMOVE EXIST. AC WALKWAY & CONSTRUCT NEW 3.5" PCC SIDEWALK ON 4" CMB PER CITY OF TORRANCE STD. PLAN NO. 103-2
10. REMOVE & REPLACE SIDEWALK (3.5" PCC ON 4" CMB), PER CITY OF TORRANCE STD. PLAN NO. 103-2
11. REMOVE DAMAGED PORTIONS OF EXIST. HAND RAILING & INSTALL NEW HAND RAILING PER SPPWC STD PLAN NO. 606-3, TYPE A TO MATCH EXIST.
12. REMOVE & REPLACE EXIST. CURB DRAIN AND CURB & GUTTER PER SPPWC STD. PLAN NO. 150-3 & 120-2, TYPE A2-8. DOWEL CURB PER CITY OF TORRANCE STD. PLAN T115. INSTALL DRAIN TO MATCH EXIST. (2 LOCATIONS)
13. REMOVE CONFLICTING IMPROVEMENTS, PROTECT EXISTING UTILITY FACILITIES AND BACKFILL AND GRADE NEW PARKWAY. IMPORT CLEAN TOP SOIL TO FILL ALL VOIDS RESULTING FROM NEW CURB ALIGNMENT. COMPACT BACKFILL TO 90% RELATIVE COMPACTION.
14. REMOVE EXIST. & CONSTRUCT NEW RADIUS DRIVEWAY APPROACH AND SIDEWALK PER CITY OF TORRANCE STD. PLAN NO. T105
15. SEE TRAFFIC SIGNAL PLANS (SHEET 10) FOR PULL BOX DISPOSITION.
30. ADJUST WATER VALVE CAN & LID TO GRADE
31. ADJUST GAS VALVE CAN & LID TO GRADE
32. ADJUST SEWER MANHOLE FRAME & COVER TO GRADE

HATCH/LINE LEGEND

- COLD MILL EXIST. AC PAVEMENT
- PROPOSED AC OVERLAY/PAVING
- PROPOSED CMB. THICKNESS PER CONST. NOTE
- PROPOSED CONCRETE IMPROVEMENTS (C&G, SW, DWY)
- PROPOSED EARTH GRADING & REMOVAL AREA
- EXIST. AC BERM
- EXIST. CONCRETE

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REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

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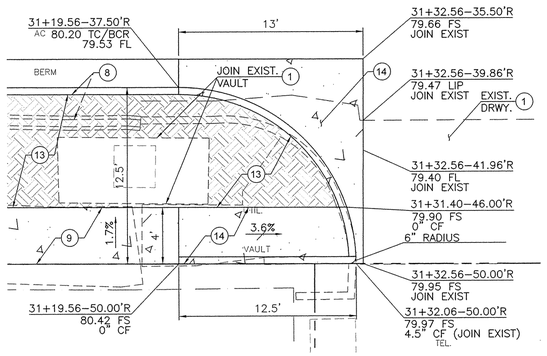
REGISTERED PROFESSIONAL ENGINEER STEVE J. HOSFORD No. 42280 CIVIL STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/18/14 DATE

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: AS SHOWN
SHEET 2 OF 15
PLAN NO. ST-1063



DETAIL A: PARTIAL DRIVEWAY ELEVATION DETAIL

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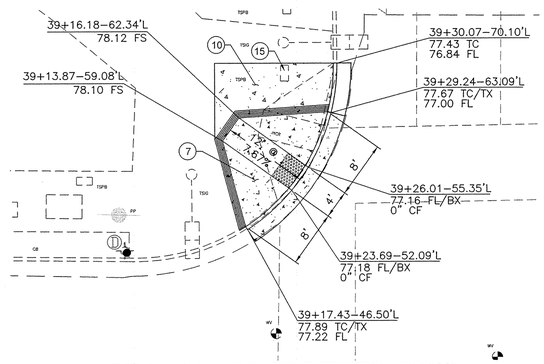
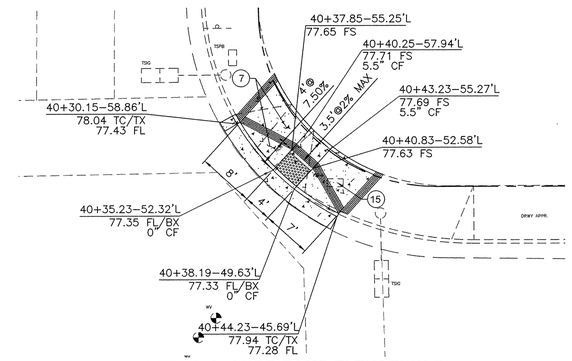


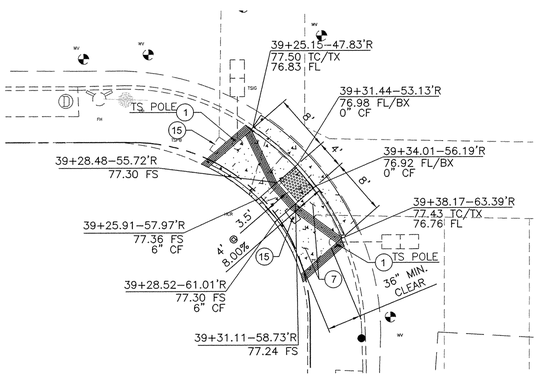
DETAIL B: CURB RAMP ELEVATION DETAIL

NW CORNER OF 190TH STREET & PRAIRIE AVENUE
SCALE: 1"=10'



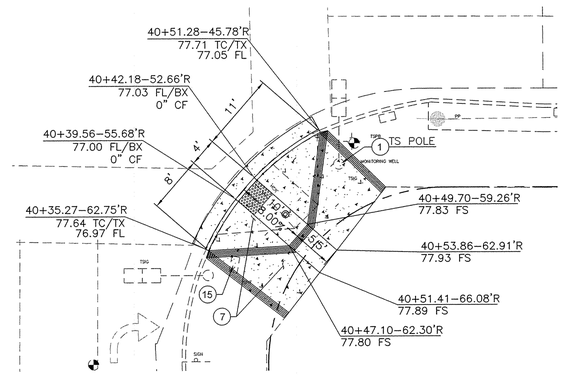
DETAIL C: CURB RAMP ELEVATION DETAIL

NE CORNER OF 190TH STREET & PRAIRIE AVENUE
SCALE: 1"=10'



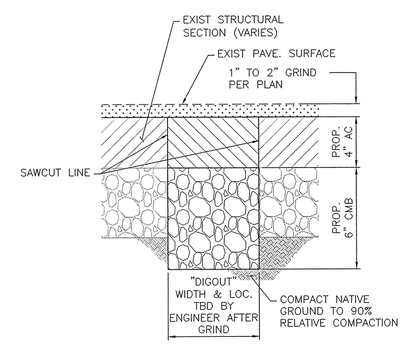
DETAIL D: CURB RAMP ELEVATION DETAIL

SW CORNER OF 190TH STREET & PRAIRIE AVENUE
SCALE: 1"=10'



DETAIL E: CURB RAMP ELEVATION DETAIL

SE CORNER OF 190TH STREET & PRAIRIE AVENUE
SCALE: 1"=10'



DETAIL F: PAVEMENT RECONSTRUCTION DETAIL ("DIGOUT")

N.T.S.

CONSTRUCTION NOTES

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4. COLD MILL EXIST. AC PAVEMENT 2" UNIFORM DEPTH PER TYPICAL SECTION.
5. FOLLOWING AC PAVEMENT GRINDING, FOR LOCALIZED AC PAVEMENT REPAIRS ("DIGOUTS"), SAWCUT, REMOVE & DISPOSE EXIST. STRUCTURAL SECTION AND UNCLASSIFIED MATERIAL TO A DEPTH OF 10". CONSTRUCT 4" AC ON 6" CMB PER DETAIL F, SHEET 3. (LOCATIONS TBD IN FIELD BY ENGINEER)
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9. REMOVE EXIST. AC WALKWAY & CONSTRUCT NEW 3.5" PCC SIDEWALK ON 4" CMB PER CITY OF TORRANCE STD. PLAN NO. 103–2
10. REMOVE & REPLACE SIDEWALK (3.5" PCC ON 4" CMB), PER CITY OF TORRANCE STD. PLAN NO. 103–2
11. REMOVE DAMAGED PORTIONS OF EXIST. HAND RAILING & INSTALL NEW HAND RAILING PER SPPWC STD PLAN NO. 606–3, TYPE A TO MATCH EXIST.
12. REMOVE & REPLACE EXIST. CURB DRAIN AND CURB & GUTTER PER SPPWC STD. PLAN NO. 150–3 & 120–2, TYPE A2–8. DOWEL CURB PER CITY OF TORRANCE STD. PLAN T115. INSTALL DRAIN TO MATCH EXIST. (2 LOCATIONS)
13. REMOVE CONFLICTING IMPROVEMENTS, PROTECT EXISTING UTILITY FACILITIES AND BACKFILL AND GRADE NEW PARKWAY. IMPORT CLEAN TOP SOIL TO FILL ALL VOIDS RESULTING FROM NEW CURB ALIGNMENT. COMPACT BACKFILL TO 90% RELATIVE COMPACTION.
14. REMOVE EXIST. & CONSTRUCT NEW RADIUS DRIVEWAY APPROACH AND SIDEWALK PER CITY OF TORRANCE STD. PLAN NO. T105
15. SEE TRAFFIC SIGNAL PLANS (SHEET 10) FOR PULL BOX DISPOSITION.
30. ADJUST WATER VALVE CAN & LID TO GRADE
31. ADJUST GAS VALVE CAN & LID TO GRADE
32. ADJUST SEWER MANHOLE FRAME & COVER TO GRADE

HATCH/LINE LEGEND

- COLD MILL EXIST. AC PAVEMENT
- PROPOSED AC OVERLAY/PAVING
- PROPOSED CMB. THICKNESS PER CONST. NOTE
- PROPOSED CONCRETE IMPROVEMENTS (C&G, SW, DWY)
- PROPOSED EARTH GRADING & REMOVAL AREA
- EXIST. AC BERM
- EXIST. CONCRETE

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227–2600
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:

DEPARTMENT OF PUBLIC WORKS BENCHMARK TAG SOUTH CURB, 900MM WEST OF BCR @ SOUTHWEST CORNER OF TORRANCE BLVD AND HAWTHORNE BLVD. 25.6M WEST AND 17.4M SOUTH OF CENTERLINE INTERSECTION.

NAME:	ELEV. (FT)	ADJUSTMENT
Y 10263	110.423	2000

(TORRANCE QUAD BOOK)

BASIS OF COORDINATES:

THE BASIS OF BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN NGS DY1217 AND NGS DY2032 BEING N 78°50'33" E AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY.

NGS DY1217 N= 1,756,746.96 E= 6,443,217.91
C.F.= 1.00005334

NGS DY2032 N= 1,764,354.38 E= 6,481,788.17
C.F.= 1.00004744

PLANS PREPARED BY:

ONWARD ENGINEERING

PLANS PREPARED BY:
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
P: (714) 533-3050
F: (714) 808-1270
STEVE J. HOSFORD, PE, RCE42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER — STEVE J. HOSFORD — No. 42280 — CIVIL — STATE OF CALIFORNIA

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/18/14 DATE

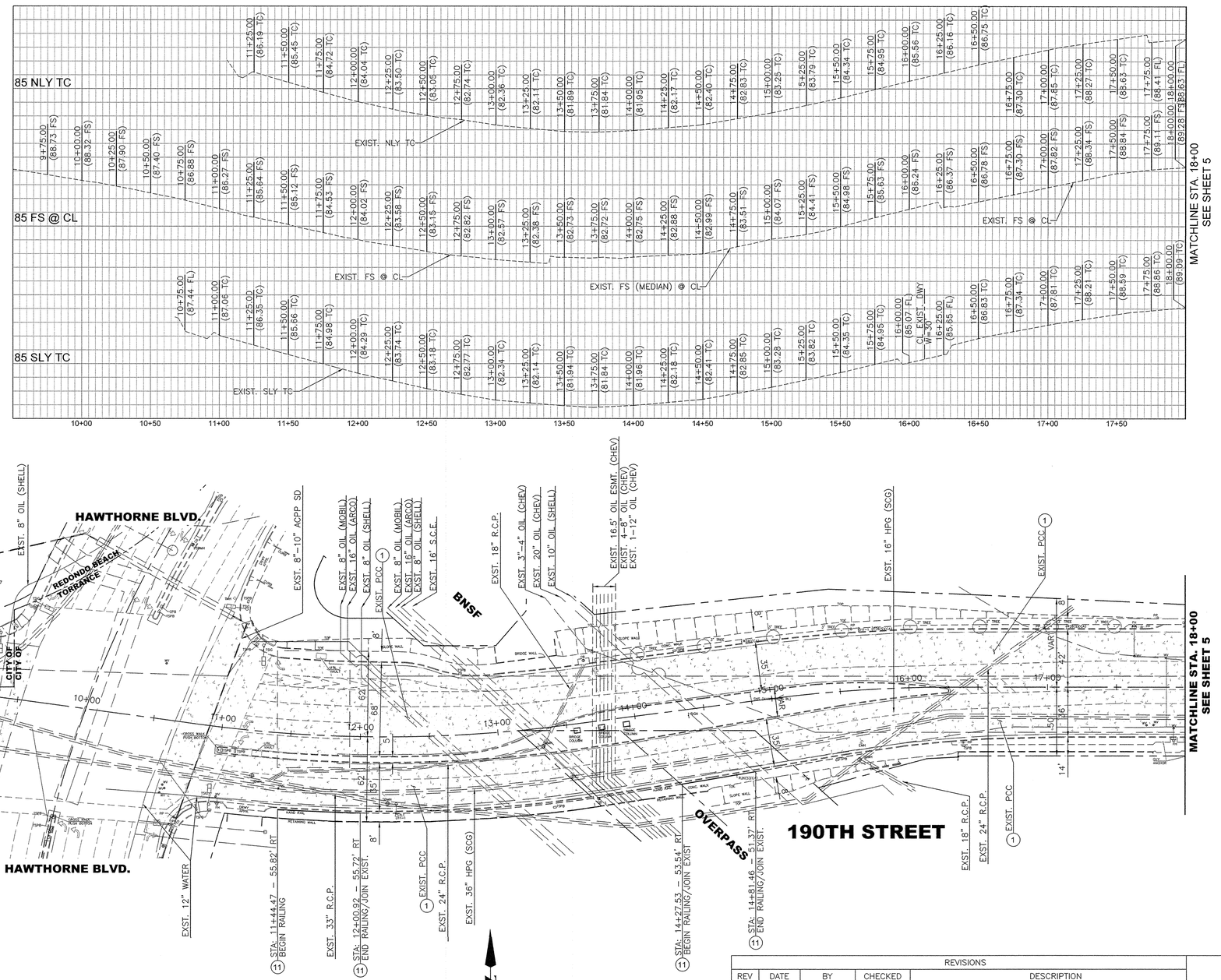
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

CONSTRUCTION DETAILS

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: AS SHOWN
SHEET 3 OF 15
PLAN NO. ST-1063



CONSTRUCTION NOTES

(1) PROTECT IN PLACE

(11) REMOVE DAMAGED PORTIONS OF EXIST. HAND RAILING & INSTALL NEW HAND RAILING PER SPPWC STD PLAN NO. 606-3, TYPE A TO MATCH EXIST.

HATCH/LINE LEGEND

EXIST. CONCRETE/PCC PAVE/BURIED PCC ROADWAY

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:

DEPARTMENT OF PUBLIC WORKS BENCHMARK TAG SOUTH CURB, 900MM WEST OF BCR @ SOUTHWEST CORNER OF TORRANCE BLVD AND HAWTHORNE BLVD. 25.6M WEST AND 17.4M SOUTH OF CENTERLINE INTERSECTION.

NAME:	ELEV. (FT)	ADJUSTMENT
Y 10263	110.423	2000
(TORRANCE QUAD BOOK)		

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STEVE J. HOSFORD, PE, RCE42280, EXP 03/31/14 — 3/10/14 DATE

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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

DRAWN BY: DS

DESIGNED BY: DS

PROJECT ENGINEER: DAVINA BUENAVISTA — 3/10/14 DATE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

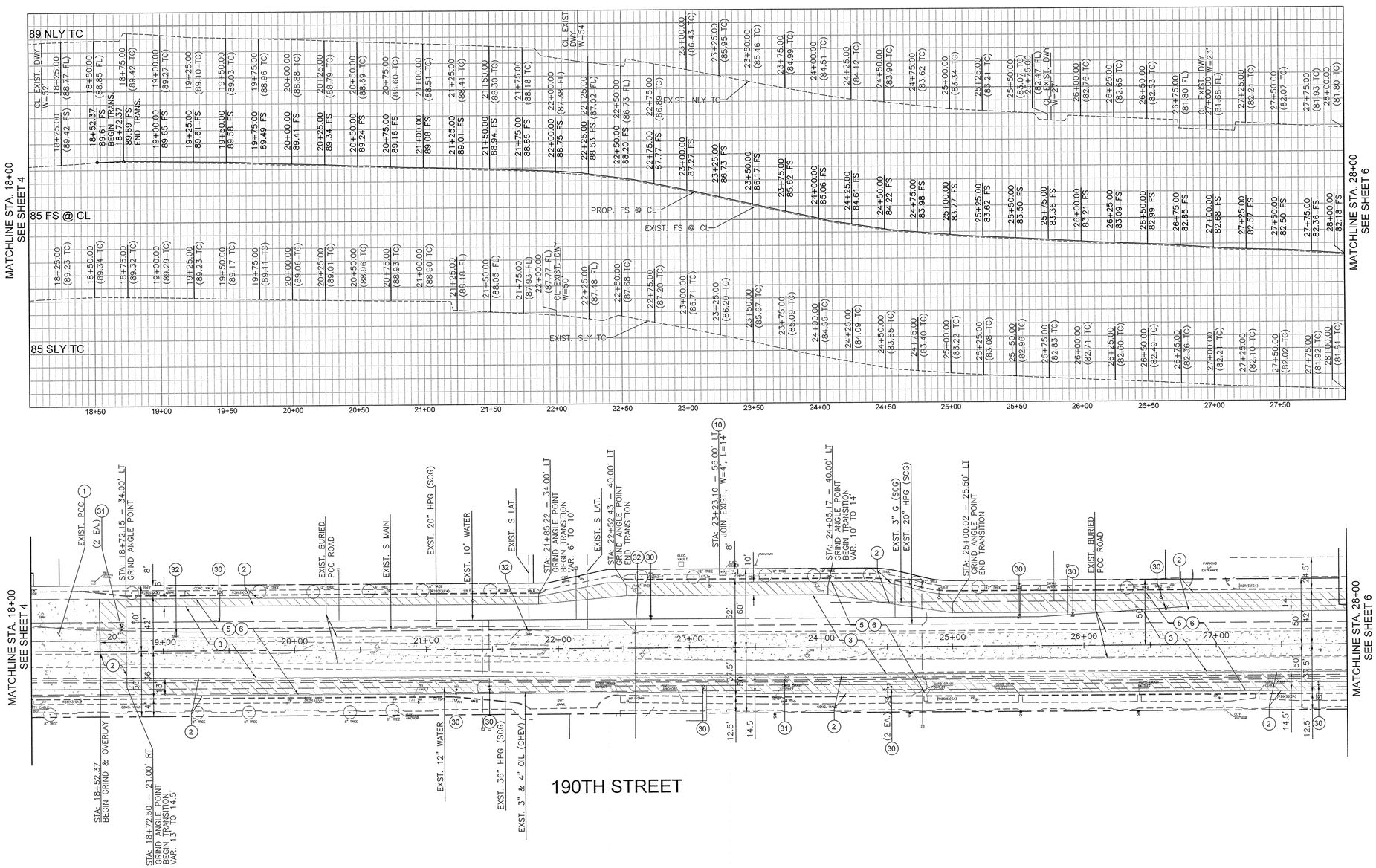
ROADWAY PLAN & PROFILE
HAWTHORNE BOULEVARD TO STA. 18+00

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/10/2014 DATE

SCALE: 1"=40'

SHEET 4 OF 15

PLAN NO. ST-1063



CONSTRUCTION NOTES

1. PROTECT IN PLACE
2. EDGE MILL EXIST. AC PAVEMENT 1"–1½" VARIABLE DEPTH PER TYPICAL SECTION, SHEET 2. WIDTH VARIES PER PLAN.
3. COLD MILL EXIST. AC PAVEMENT 1" UNIFORM DEPTH PER TYPICAL SECTION.
5. FOLLOWING AC PAVEMENT GRINDING, FOR LOCALIZED AC PAVEMENT REPAIRS ("DIGOUTS"), SAWCUT, REMOVE & DISPOSE EXIST. STRUCTURAL SECTION AND UNCLASSIFIED MATERIAL TO A DEPTH OF 10". CONSTRUCT 4" AC ON 6" CMB PER DETAIL F, SHEET 3. (LOCATIONS TBD IN FIELD BY ENGINEER)
6. CONSTRUCT 2" AC (C2–PG 64–10) OVERLAY PER TYPICAL SECTION
10. REMOVE & REPLACE SIDEWALK (3.5" PCC ON 4" CMB), PER CITY OF TORRANCE STD. PLAN NO. 103–2
30. ADJUST WATER VALVE CAN & LID TO GRADE
31. ADJUST GAS VALVE CAN & LID TO GRADE
32. ADJUST SEWER MANHOLE FRAME & COVER TO GRADE

HATCH/LINE LEGEND

- EDGE MILL EXIST. AC PAVEMENT (VARIABLE DEPTH) AND OVERLAY
- PROPOSED CONCRETE
- EXIST. CONCRETE/PCC PAVE/BURIED PCC ROADWAY

GRAPHIC SCALE
40 0 20 40 80
1" = 40'

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

ROADWAY PLAN & PROFILE
STA. 18+00 TO STA. 28+00

Underground Service Alert
Call: TOLL FREE 1–800 227–2600
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
DEPARTMENT OF PUBLIC WORKS BENCHMARK TAG SOUTH CURB, 900MM WEST OF BCR @ SOUTHWEST CORNER OF TORRANCE BLVD AND HAWTHORNE BLVD. 25.6M WEST AND 17.4M SOUTH OF CENTERLINE INTERSECTION.

NAME:	ELEV. (FT)	ADJUSTMENT
Y 10263 (TORRANCE QUAD BOOK)	110.423	2000

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P: (714) 533-3050
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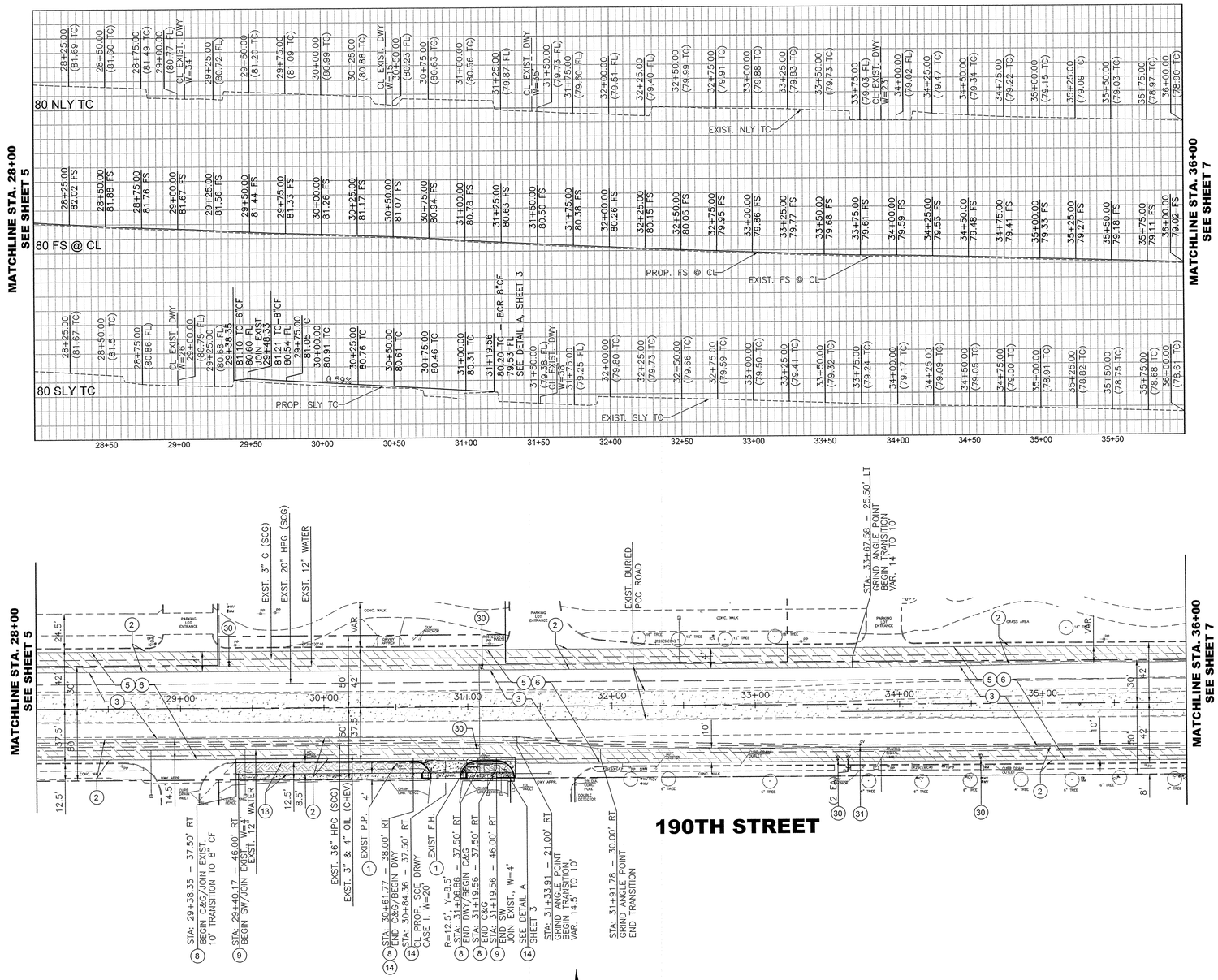
STEVE J. HOSFORD, PE, RCE42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER STEVE J. HOSFORD No. 42280 CIVIL STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/18/14 DATE

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: 1"=40'
SHEET 5 OF 15
PLAN NO. ST-1063



CONSTRUCTION NOTES

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6. CONSTRUCT 2" AC (C2–PG 64–10) OVERLAY PER TYPICAL SECTION
8. REMOVE EXIST. AC CURB & CONSTRUCT NEW TYPE A2–8 CURB & GUTTER PER SPPWC STD. PLAN NO. 120–2 ON 8" CMB.
9. REMOVE EXIST. AC WALKWAY & CONSTRUCT NEW 3.5" PCC SIDEWALK ON 4" CMB PER CITY OF TORRANCE STD. PLAN NO. 103–2
13. REMOVE CONFLICTING IMPROVEMENTS, PROTECT EXISTING UTILITY FACILITIES AND BACKFILL AND GRADE NEW PARKWAY. IMPORT CLEAN TOP SOIL TO FILL ALL VOIDS RESULTING FROM NEW CURB ALIGNMENT. COMPACT BACKFILL TO 90% RELATIVE COMPACTION.
14. REMOVE EXIST. & CONSTRUCT NEW RADIUS DRIVEWAY APPROACH AND SIDEWALK PER CITY OF TORRANCE STD. PLAN NO. T105
30. ADJUST WATER VALVE CAN & LID TO GRADE
31. ADJUST GAS VALVE CAN & LID TO GRADE

HATCH/LINE LEGEND

- EDGE MILL EXIST. AC PAVEMENT (VARIABLE DEPTH) AND OVERLAY
- PROPOSED CONCRETE
- PROPOSED EARTH GRADING AND REMOVAL AREA
- EXIST. CONCRETE/PCC PAVE/BURIED PCC ROADWAY

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BENCHMARK:

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REVISIONS				
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DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/10/14 DATE

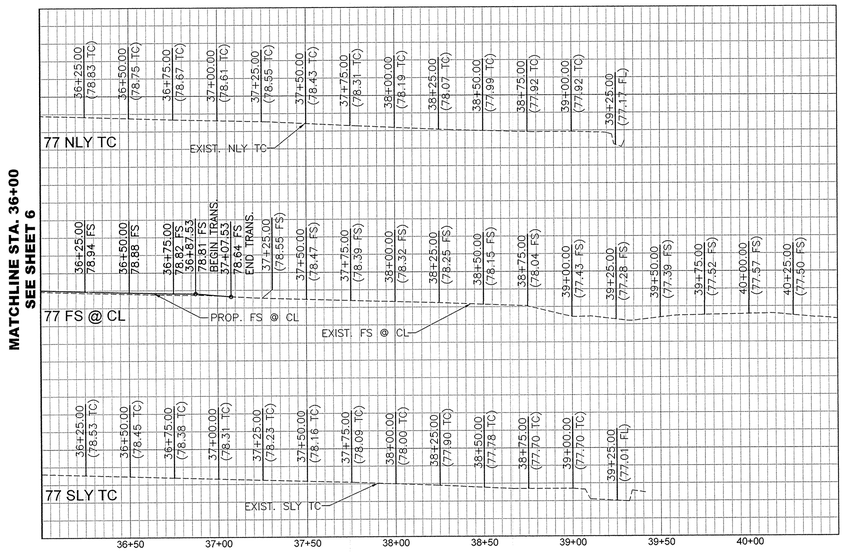
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

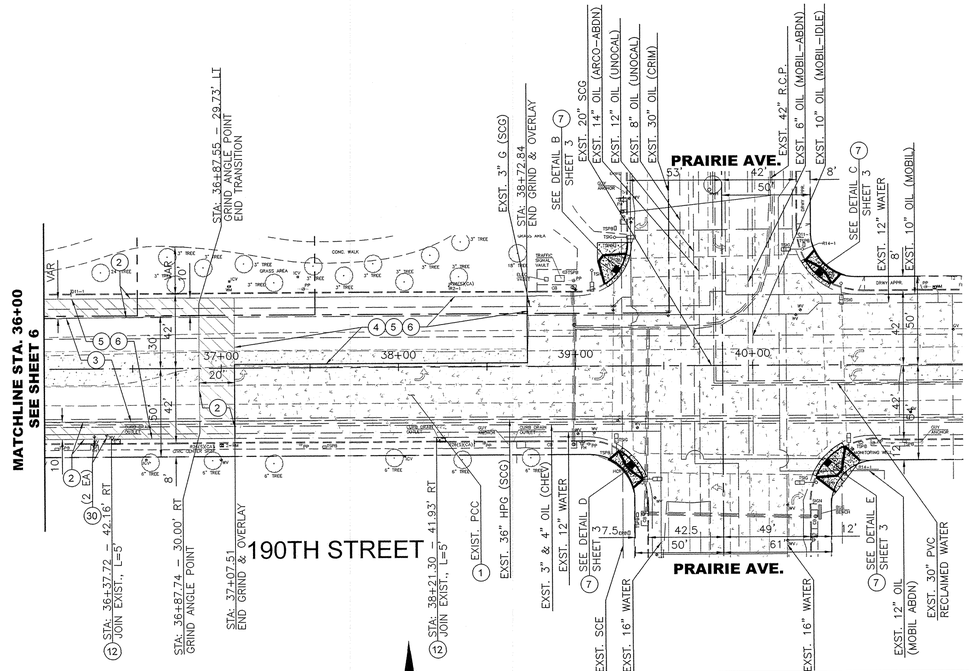
190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

ROADWAY PLAN & PROFILE
STA. 28+00 TO STA. 36+00

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: 1"=40'
SHEET 6 OF 15
PLAN NO. ST-1063





CONSTRUCTION NOTES

1. PROTECT IN PLACE
2. EDGE MILL EXIST. AC PAVEMENT 1"–1⅜" VARIABLE DEPTH PER TYPICAL SECTION, SHEET 2. WIDTH VARIES PER PLAN.
3. COLD MILL EXIST. AC PAVEMENT 1" UNIFORM DEPTH PER TYPICAL SECTION.
4. COLD MILL EXIST. AC PAVEMENT 2" UNIFORM DEPTH PER TYPICAL SECTION.
5. FOLLOWING AC PAVEMENT GRINDING, FOR LOCALIZED AC PAVEMENT REPAIRS ("DIGOUTS"), SAWCUT, REMOVE & DISPOSE EXIST. STRUCTURAL SECTION AND UNCLASSIFIED MATERIAL TO A DEPTH OF 10". CONSTRUCT 4" AC ON 6" CMB PER DETAIL F, SHEET 3. (LOCATIONS TBD IN FIELD BY ENGINEER)
6. CONSTRUCT 2" AC (C2–PG 64–10) OVERLAY PER TYPICAL SECTION
7. REMOVE EXIST. & INSTALL NEW CURB RAMP PER SPPWC STD. PLAN NO. 111–4 CASE A, TYPES 1 OR 2, & DETAILS ON SHEET 3.
12. REMOVE & REPLACE EXIST. CURB DRAIN AND CURB & GUTTER PER SPPWC STD. PLAN NO. 150–3 & 120–2, TYPE A2–8. DOWEL CURB PER CITY OF TORRANCE STD. PLAN T115. INSTALL DRAIN TO MATCH EXIST. (2 LOCATIONS)
30. ADJUST WATER VALVE CAN & LID TO GRADE

HATCH/LINE LEGEND

- EDGE MILL EXIST. AC PAVEMENT (VARIABLE DEPTH) AND OVERLAY
- EXIST. CONCRETE/PCC PAVE/BURIED PCC ROADWAY

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Y 10263	110.423	2000

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STEVE J. HOSFORD, PE, RCE 42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER — STEVE J. HOSFORD — No. 42280 — CIVIL — STATE OF CALIFORNIA

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/18/14 DATE

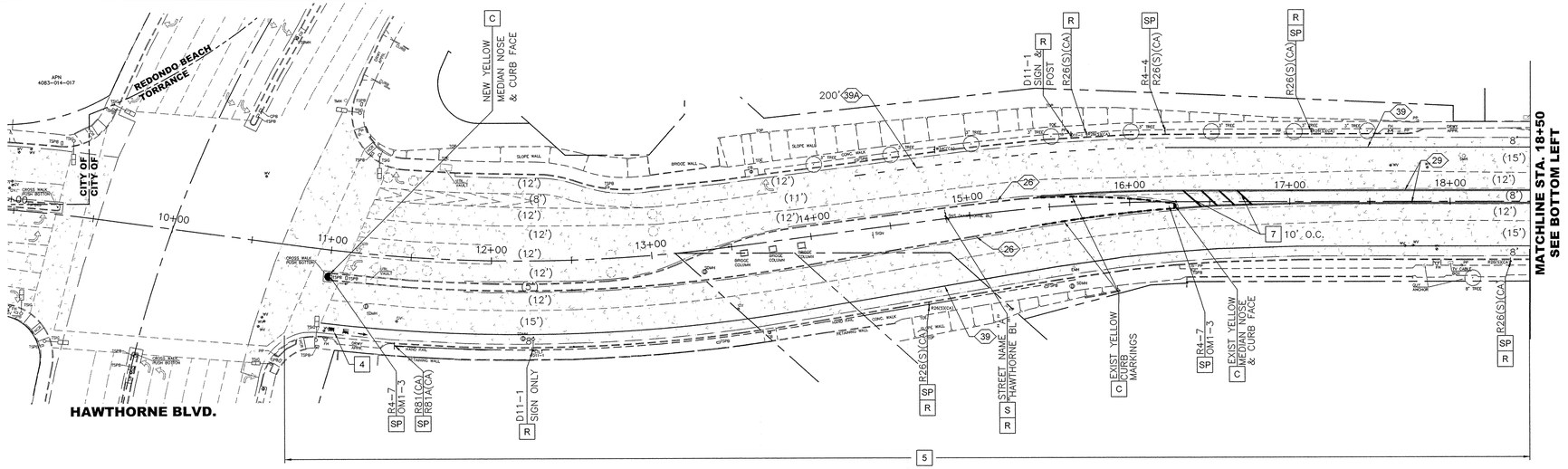
APPROVED BY: CRAIG BILEZERIAN, P.E. — 3/18/2014 DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)

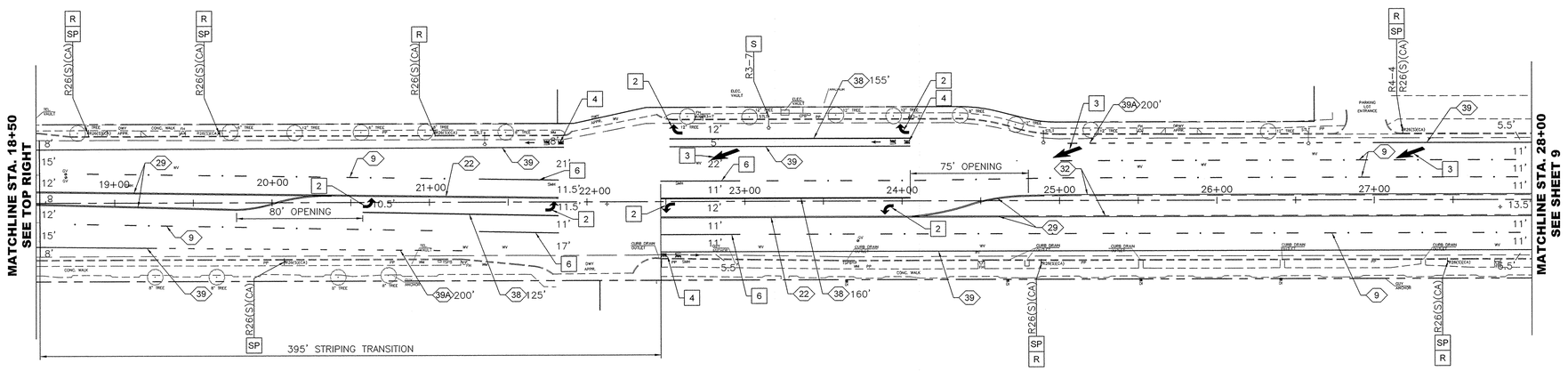
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

ROADWAY PLAN & PROFILE
STA. 36+00 TO PRAIRIE AVENUE

SCALE: 1"=40'
SHEET 7 OF 15
PLAN NO. ST-1063

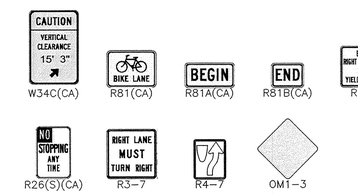


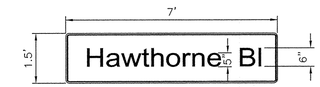


PAVEMENT MARKING & STRIPING NOTES:

- ## — INSTALL PAVEMENT MARKERS AND TRAFFIC LINES DETAIL NUMBER PER CALTRANS STD PLAN A20A–A20D
- 2 — INSTALL THERMOPLASTIC TYPE IV (L) OR (R) ARROW PER CALTRANS STD PLAN A24A
- 3 — INSTALL THERMOPLASTIC TYPE VI ARROW PER CALTRANS STD PLAN A24A
- 4 — INSTALL THERMOPLASTIC "BIKE LANE" WORD MARKING PER CALTRANS STD PLAN A24D AND BIKE LANE ARROW PER CALTRANS STD PLAN A24A
- 6 — INSTALL 50' LONG 4" WHITE LANE LINE & MARKERS PER DETAIL A, SHEET 8
- 7 — INSTALL 12" YELLOW THERMOPLASTIC DIAGONAL MARKINGS AT 45° ANGLE AND AS SHOWN
- C — PAINT (OR REPAINT) CURB FACE, TOP OF CURB AND/OR TOP OF MEDIAN PER PLAN COLOR.
- SP — INSTALL NEW SIGN(S) AND POST. DESIGNATION PER PLAN.
- S — INSTALL NEW SIGN(S) ON EXISTING POST. DESIGNATION PER PLAN.
- R — REMOVE EXISTING SIGN AND/OR POST.

TRAFFIC SIGN LEGEND:





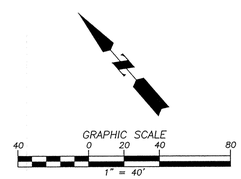
STREET NAME SIGN "A"
WHITE LETTERING ON GREEN BACKGROUND
1.25" WIDE WHITE BORDER

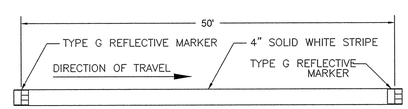
SIGNING & STRIPING GENERAL NOTES:

1. INSTALLATION OF ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS:
   2012 CALIFORNIA MUTCD
   2010 CALTRANS STANDARD PLANS AND SPECIFICATIONS
3. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PERFORATED STEEL TUBING WITH BREAKAWAY BASE.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW, WITH GLASS BEADS PER SPECIFICATIONS.
7. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY THE ENGINEER OF WORK PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
8. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN. ALL SIGNS SHALL BE MADE OF 3M DIAMOND GRADE CUBED, WITH PROTECTIVE OVERLAY FILM AND MATCHED COMPONENTS SYSTEM WARRANTY, (12 YEARS) ON 0.080 ALUMINUM WITH "TORRANCE" ON BORDER.

SIGNING & STRIPING GENERAL NOTES (CONT):

9. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
10. ALL STRIPING, LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE THERMOPLASTIC. CURB MARKINGS SHALL BE PAINT
11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED AT THE COMPLETION OF THE ENTIRE ROADWAY OVERLAY AND WHEN DIRECTED BY THE ENGINEER.
12. ALL TYPE IV PAVEMENT MARKINGS AT THE CROSSWALK SHALL BE CENTERED BETWEEN THE FIRST AND SECOND LOOP DETECTORS.
13. INSTALLATION OF PERMANENT SIGNING AND STRIPING SHALL BE DONE ONLY AFTER APPROVAL BY THE ENGINEER OF THE STRIPING CAT–TRACKS. CONTACT THE ENGINEER AT (310) 618–3057 TO SCHEDULE AN INSPECTION AT LEAST 24 HOURS BEFORE COMPLETING LAYOUTS. THE ENGINEER OR DESIGNEE MUST APPROVE ANY CHANGES DUE TO PLAN DISCREPANCIES OR REVISIONS.
14. STRIPING SHALL BEGIN AND TERMINATE AT THE CENTER CORNER DELTA, AT THE LIMIT LINES, OR THE BACK OF THE CROSSWALK.
15. CONTRACTOR SHALL INSTALL A TYPE D BLUE REFLECTIVE MARKER AT EACH FIRE HYDRANT LOCATION WITHIN THE PROJECT LIMITS. THE REFLECTOR SHALL BE 6" FROM THE CENTERLINE STRIPE, OR APPROXIMATE CENTER OF THE PAVEMENT WHERE THERE IS NO CENTERLINE STRIPE, ON THE SIDE NEAREST THE FIRE HYDRANT (PER CA–MUTCD 2012, FIG 3B–102). MARKER LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.





DETAIL A: 50' LANE LINE
NTS

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE
1–800
227–2600
TWO WORKING DAYS BEFORE YOU DIG

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

SIGNING & STRIPING
HAWTHORNE BOULEVARD TO STA. 28+00

PLANS PREPARED BY:
ONWARD ENGINEERING

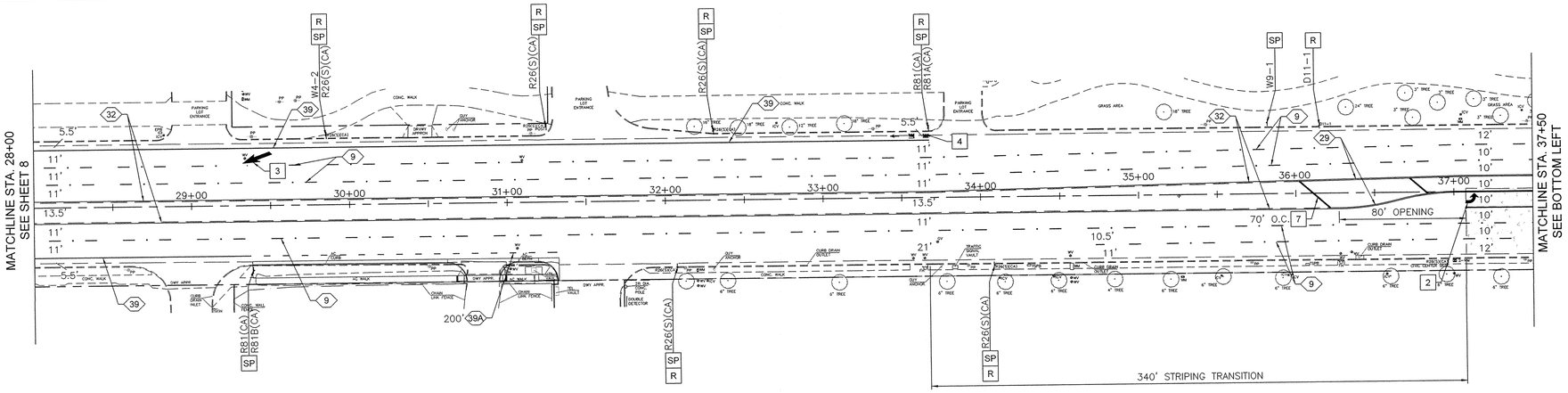
PLANS PREPARED BY:
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
P: (714) 533-3050
F: (714) 808-1270
STEVE J. HOSFORD, PE, RCE 42280, EXP 03/31/14 — 3/10/14 DATE

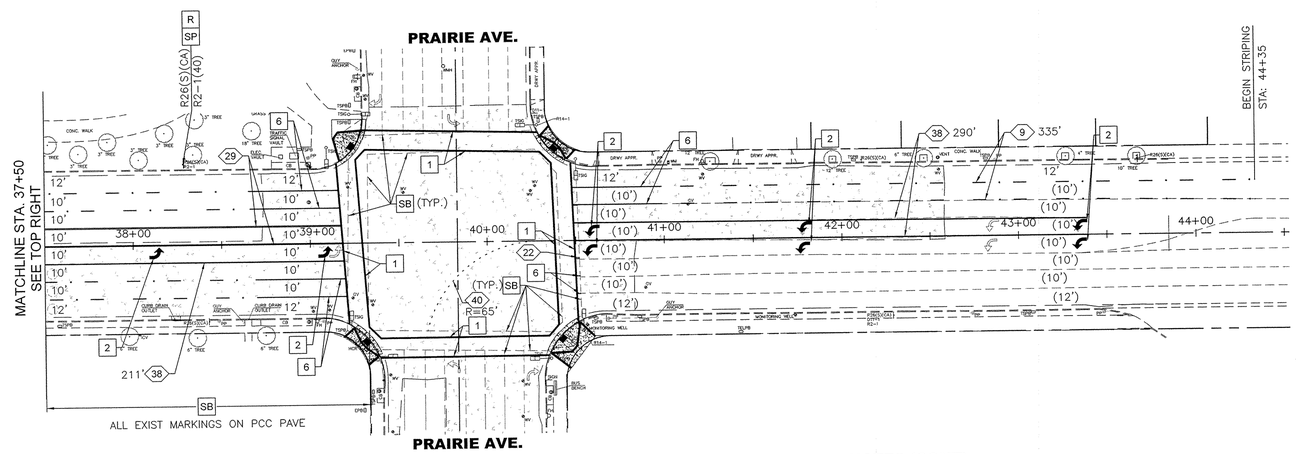
REGISTERED PROFESSIONAL ENGINEER — STEVE J. HOSFORD — No. 42280 — CIVIL — STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/10/14 DATE

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/10/2014 DATE

SCALE: 1"=40'
SHEET 8 OF 15
PLAN NO. C-81-127A

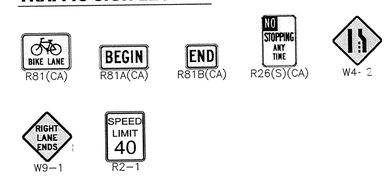




CONSTRUCTION NOTES

- (##) INSTALL PAVEMENT MARKERS AND TRAFFIC LINES DETAIL NUMBER PER CALTRANS STD PLAN A20A–A20D
- 1 INSTALL 12" WHITE THERMOPLASTIC CROSSWALK (10' CLEAR) OR LIMIT LINE PER CALTRANS STD PLAN A24E
- 2 INSTALL THERMOPLASTIC TYPE IV (L) OR (R) ARROW PER CALTRANS STD PLAN A24A
- 3 INSTALL THERMOPLASTIC TYPE VI ARROW PER CALTRANS STD PLAN A24A
- 4 INSTALL THERMOPLASTIC "BIKE LANE" WORD MARKING PER CALTRANS STD PLAN A24D AND BIKE LANE ARROW PER CALTRANS STD PLAN A24A
- 6 INSTALL 50' LONG 4" WHITE LANE LINE & MARKERS PER DETAIL A, SHEET 8
- 7 INSTALL 12" YELLOW THERMOPLASTIC DIAGONAL MARKINGS AT 45° ANGLE AND AS SHOWN
- SB SAND–BLAST (PAINT) OR GRIND (THERMO) EXISTING CONFLICTING PAVEMENT MARKINGS/LEGENDS
- SP INSTALL NEW SIGN(S) AND POST. DESIGNATION PER PLAN.
- R REMOVE EXISTING SIGN AND/OR POST.

TRAFFIC SIGN LEGEND:



SIGNING & STRIPING GENERAL NOTES:

1. INSTALLATION OF ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS:
   2012 CALIFORNIA MUTCD
   2010 CALTRANS STANDARD PLANS AND SPECIFICATIONS
3. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PERFORATED STEEL TUBING WITH BREAKAWAY BASE.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW, WITH GLASS BEADS PER SPECIFICATIONS.
7. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY THE ENGINEER OF WORK PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
8. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN. ALL SIGNS SHALL BE MADE OF 3M DIAMOND GRADE CUBED, WITH PROTECTIVE OVERLAY FILM AND MATCHED COMPONENTS SYSTEM WARRANTY, (12 YEARS) ON 0.080 ALUMINUM WITH "TORRANCE" ON BORDER.

SIGNING & STRIPING GENERAL NOTES (CONT):

9. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
10. ALL STRIPING, LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE THERMOPLASTIC. CURB MARKINGS SHALL BE PAINT
11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED AT THE COMPLETION OF THE ENTIRE ROADWAY OVERLAY AND WHEN DIRECTED BY THE ENGINEER.
12. ALL TYPE IV PAVEMENT MARKINGS AT THE CROSSWALK SHALL BE CENTERED BETWEEN THE FIRST AND SECOND LOOP DETECTORS.
13. INSTALLATION OF PERMANENT SIGNING AND STRIPING SHALL BE DONE ONLY AFTER APPROVAL BY THE ENGINEER OF THE STRIPING CAT–TRACKS. CONTACT THE ENGINEER AT (310) 618–3057 TO SCHEDULE AN INSPECTION AT LEAST 24 HOURS BEFORE COMPLETING LAYOUTS. THE ENGINEER OR DESIGNEE MUST APPROVE ANY CHANGES DUE TO PLAN DISCREPANCIES OR REVISIONS.
14. STRIPING SHALL BEGIN AND TERMINATE AT THE CENTER CORNER DELTA, AT THE LIMIT LINES, OR THE BACK OF THE CROSSWALK.
15. CONTRACTOR SHALL INSTALL A TYPE D BLUE REFLECTIVE MARKER AT EACH FIRE HYDRANT LOCATION WITHIN THE PROJECT LIMITS. THE REFLECTOR SHALL BE 6" FROM THE CENTERLINE STRIPE, OR APPROXIMATE CENTER OF THE PAVEMENT WHERE THERE IS NO CENTERLINE STRIPE, ON THE SIDE NEAREST THE FIRE HYDRANT (PER CA–MUTCD 2012, FIG 3B–102). MARKER LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

GRAPHIC SCALE
40 0 20 40 80
1" = 40'

Underground Service Alert
Call: TOLL FREE
1–800
227–2600
TWO WORKING DAYS BEFORE YOU DIG

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

SIGNING & STRIPING
STA. 28+00 TO 450' EAST OF PRAIRIE AVE.

PLANS PREPARED BY:
ONWARD ENGINEERING

PLANS PREPARED BY:
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
P: (714) 533-3050
F: (714) 808-1270

STEVE J. HOSFORD, PE, REG. 42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER
STEVE J. HOSFORD
No. 42280
CIVIL
STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER:
DAVINA BUENAVISTA — 3/10/14 DATE

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/10/2014 DATE

SCALE: 1"=40'
SHEET 9 OF 15
PLAN NO. C-81-127A

CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	RUN NO. 1	2	3	4	5	6	7	8
12 CSC	TRAFFIC & PEDESTRIAN SIGNAL	2	3	4	1	2	3	8	8
3 CSC	PEDESTRIAN PUSH BUTTON	2	3	4	1	2	3	8	8
#12	I.I.S.N.S.	2	2	2	–	2	2	4	4
#10	LUMINAIRE	2	2	2	–	2	2	4	4
#8	SIGNAL SERIVCE	–	–	–	–	–	–	–	3
TYPE B DLC	ø2	3	3	3	–	–	–	3	3
	ø4	3	3	3	–	–	–	3	3
	ø6	–	–	–	–	–	3	3	3
	ø8	–	–	3	–	–	–	3	3
	TOTAL	6	6	9	0	0	3	12	12
EVP CABLE (M-138)		1	2	2	–	1	1	4	4
VIDEO COAX CABLE		1	2	2	–	1	1	4	4
3-#14 VIDEO POWER CABLE		1	2	2	–	1	1	4	4
SIGNAL INTERCONNECT (FOC)		–	–	–	–	–	–	–	(E)1
CONDUIT SIZE		4"	4"	4"	2"	(E)3"	(E)3"	▲	•
PERCENT FILL		15%	20%	25%	16%	19%	28%	31%	42%

ALL CONDUCTORS AND CONDUITS SHALL BE NEW UNLESS OTHERWISE INDICATED.
(E) = EXISTING.
▲ = ex. 3" & **NEW 4"**
• = ex. 2-3" & ex. 1-3" (FO).

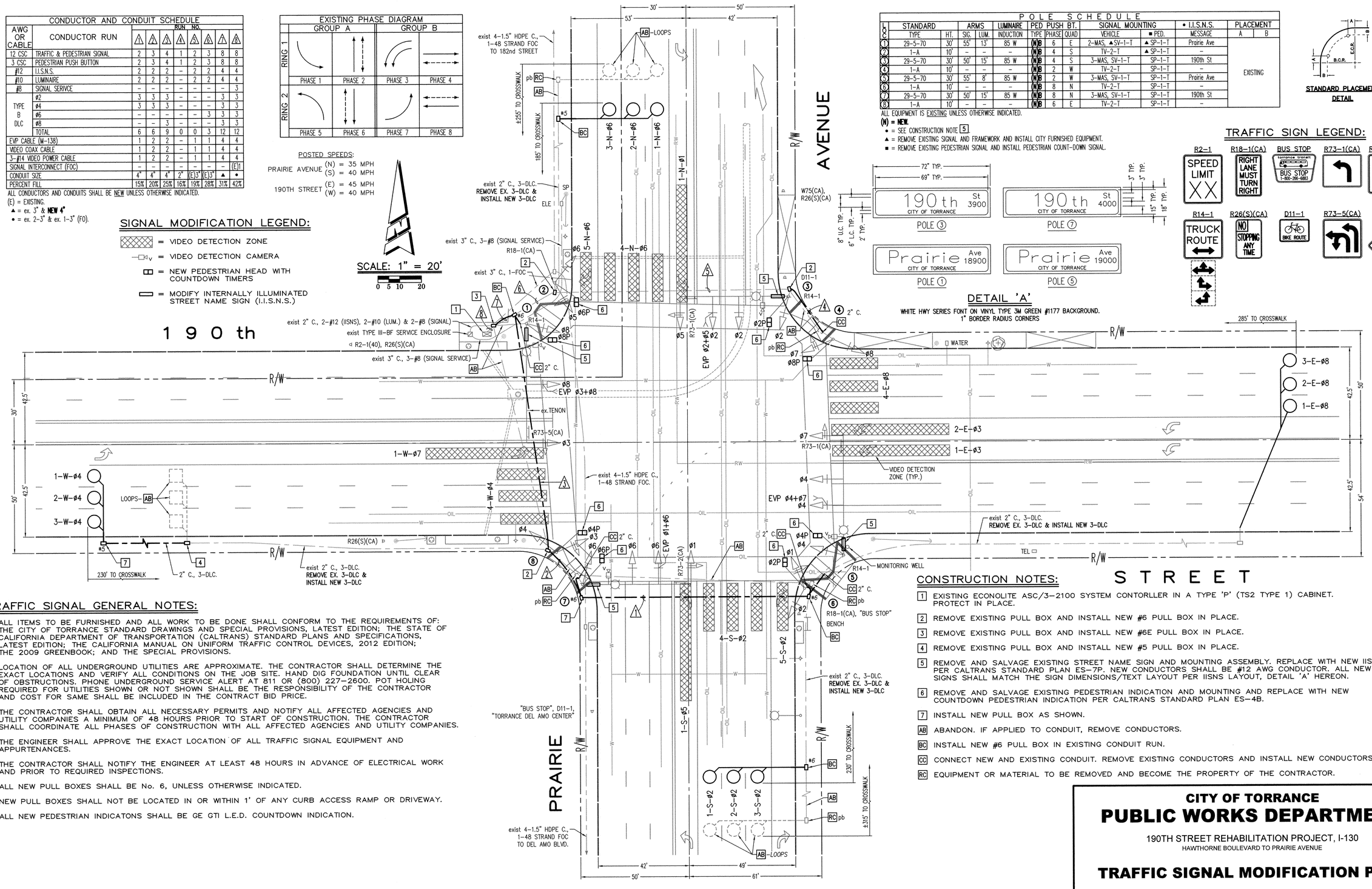
EXISTING PHASE DIAGRAM

POSTED SPEEDS:
PRAIRIE AVENUE (N) = 35 MPH (S) = 40 MPH
190TH STREET (E) = 45 MPH (W) = 40 MPH

SCALE: 1" = 20'
0 5 10 20

SIGNAL MODIFICATION LEGEND:

- = VIDEO DETECTION ZONE
- = VIDEO DETECTION CAMERA
- = NEW PEDESTRIAN HEAD WITH COUNTDOWN TIMERS
- = MODIFY INTERNALLY ILLUMINATED STREET NAME SIGN (I.I.S.N.S.)



POLE SCHEDULE

LOC	STANDARD TYPE	HT.	ARMS SIG.	ARMS LUM.	LUMINAIRE INDUCTION	PED PUSH BT. TYPE	PHASE	QUAD	SIGNAL MOUNTING VEHICLE	■ PED.	• I.I.S.N.S. MESSAGE	PLACEMENT A	B
1	29-5-70	30'	55'	13'	85 W	(N)8	6	E	2-MAS, ▲SV-1-T	▲ SP-1-T	Prairie Ave	EXISTING	
2	1-A	10'	–	–	–	(N)8	4	S	TV-2-T	▲ SP-1-T	–		
3	29-5-70	30'	50'	15'	85 W	(N)8	4	S	3-MAS, SV-1-T	SP-1-T	190th St		
4	1-A	10'	–	–	–	(N)8	2	W	TV-2-T	SP-1-T	–		
5	29-5-70	30'	55'	8'	85 W	(N)8	2	W	3-MAS, SV-1-T	SP-1-T	Prairie Ave		
6	1-A	10'	–	–	–	(N)8	8	N	TV-2-T	SP-1-T	–		
7	29-5-70	30'	50'	15'	85 W	(N)8	8	N	3-MAS, SV-1-T	SP-1-T	190th St		
8	1-A	10'	–	–	–	(N)8	6	E	TV-2-T	SP-1-T	–		

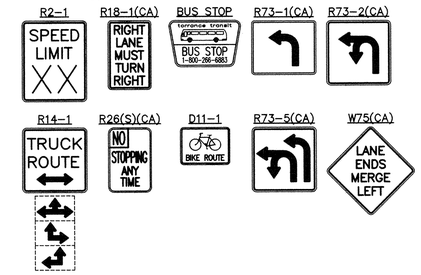
ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE INDICATED.
(N) = NEW.
• = SEE CONSTRUCTION NOTE 5.
▲ = REMOVE EXISTING SIGNAL AND FRAMEWORK AND INSTALL CITY FURNISHED EQUIPMENT.
■ = REMOVE EXISTING PEDESTRIAN SIGNAL AND INSTALL PEDESTRIAN COUNT-DOWN SIGNAL.

STANDARD PLACEMENT DETAIL

DETAIL 'A'

WHITE HWY SERIES FONT ON VINYL TYPE 3M GREEN #1177 BACKGROUND.
1" BORDER RADIUS CORNERS

TRAFFIC SIGN LEGEND:



TRAFFIC SIGNAL GENERAL NOTES:

1. ALL ITEMS TO BE FURNISHED AND ALL WORK TO BE DONE SHALL CONFORM TO THE REQUIREMENTS OF: THE CITY OF TORRANCE STANDARD DRAWINGS AND SPECIAL PROVISIONS, LATEST EDITION; THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION; THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2012 EDITION; THE 2009 GREENBOOK; AND THE SPECIAL PROVISIONS.
2. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE. HAND DIG FOUNDATION UNTIL CLEAR OF OBSTRUCTIONS. PHONE UNDERGROUND SERVICE ALERT AT 811 OR (800) 227-2600. POT HOLING REQUIRED FOR UTILITIES SHOWN OR NOT SHOWN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COST FOR SAME SHALL BE INCLUDED IN THE CONTRACT BID PRICE.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL AFFECTED AGENCIES AND UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL PHASES OF CONSTRUCTION WITH ALL AFFECTED AGENCIES AND UTILITY COMPANIES.
4. THE ENGINEER SHALL APPROVE THE EXACT LOCATION OF ALL TRAFFIC SIGNAL EQUIPMENT AND APPURTENANCES.
5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF ELECTRICAL WORK AND PRIOR TO REQUIRED INSPECTIONS.
6. ALL NEW PULL BOXES SHALL BE No. 6, UNLESS OTHERWISE INDICATED.
7. NEW PULL BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP OR DRIVEWAY.
8. ALL NEW PEDESTRIAN INDICATONS SHALL BE GE GTI L.E.D. COUNTDOWN INDICATION.

CONSTRUCTION NOTES:

1. EXISTING ECONOLITE ASC/3-2100 SYSTEM CONTORLLER IN A TYPE 'P' (TS2 TYPE 1) CABINET. PROTECT IN PLACE.
2. REMOVE EXISTING PULL BOX AND INSTALL NEW #6 PULL BOX IN PLACE.
3. REMOVE EXISTING PULL BOX AND INSTALL NEW #6E PULL BOX IN PLACE.
4. REMOVE EXISTING PULL BOX AND INSTALL NEW #5 PULL BOX IN PLACE.
5. REMOVE AND SALVAGE EXISTING STREET NAME SIGN AND MOUNTING ASSEMBLY. REPLACE WITH NEW IISNS PER CALTRANS STANDARD PLAN ES-7P. NEW CONDUCTORS SHALL BE #12 AWG CONDUCTOR. ALL NEW SIGNS SHALL MATCH THE SIGN DIMENSIONS/TEXT LAYOUT PER IISNS LAYOUT, DETAIL 'A' HEREON.
6. REMOVE AND SALVAGE EXISTING PEDESTRIAN INDICATION AND MOUNTING AND REPLACE WITH NEW COUNTDOWN PEDESTRIAN INDICATION PER CALTRANS STANDARD PLAN ES-4B.
7. INSTALL NEW PULL BOX AS SHOWN.

AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
BC INSTALL NEW #6 PULL BOX IN EXISTING CONDUIT RUN.
CC CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL NEW CONDUCTORS.
RC EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION PROJECT, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC SIGNAL MODIFICATION PLAN

Know what's below. Call before you dig.

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

HARTZOG & CRABILL, Inc.
Consulting Traffic Engineers
17852 East 17th Street, Suite 101
Tustin, California 92780-1944
tel: (714) 731-9455 fax: (714) 731-9498
www.hartzog-crabill.com

PLAN PREPARED UNDER THE SUPERVISION OF:
MARK J. ESPOSITO RCE No. C69921 (Exp. 09-30-2014) 3-7-2014 DATE

REGISTERED PROFESSIONAL ENGINEER MARK J. ESPOSITO No. C69921 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

DRAWN BY: DM
DESIGNED BY: DM
PROJECT ENGINEER: NAME 3/18/14 DATE

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: 1"=20'
SHEET 10 OF 15
PLAN NO. TS98-267(A)

TRAFFIC CONTROL GENERAL NOTES

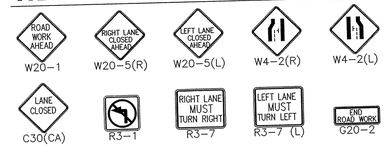
1. ALL TRAFFIC CONTROL WORK FOR CONSTRUCTION SHALL CONFORM TO PART 6, "TEMPORARY TRAFFIC CONTROL" OF THE 2012 CALIFORNIA MUTCD, AND THE 2010 CALTRANS STANDARD PLANS AND SPECIFICATIONS. SIGNING AND STRIPING SHALL CONFORM TO LATEST MUTCD AND 2012 CALIFORNIA MUTCD, STANDARD PLANS AND STANDARD SPECIFICATIONS. SIGNS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
2. EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES SHALL BE AS DIRECTED BY ENGINEER BASED ON CONSTRUCTION CONDITIONS. ADDITIONAL WARNING OR CONSTRUCTION SIGNS MAY BE REQUIRED BY THE ENGINEER.
3. ALL NIGHT WORK SHALL BE APPROVED IN ADVANCE BY THE ENGINEER.
4. STREET CLOSURES SHALL BE APPROVED BY THE ENGINEER WHENEVER APPLICABLE. DETOUR PLANS SHALL BE SUBMITTED AND APPROVED BY THE CITY WHENEVER APPLICABLE. RESIDENTS/BUSINESSES SHALL BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
5. PRESSURE SENSITIVE DETOUR GRADE TRAFFIC MARKING TAPE AND/OR TEMPORARY FLEXIBLE RAISED PAVEMENT MARKERS MAY BE REQUIRED TO SUPPLEMENT THE CHANNELIZING DEVICES, DRUMS, REFLECTORIZED SIGNS, PAINT, AND BARRICADES AS DIRECTED BY THE ENGINEER.
6. ALL CONFLICTING STRIPES, PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS AND LEGENDS SHALL BE COMPLETELY REMOVED BY WET SANDBLASTING OR GRINDING PRIOR TO ANY CHANGE IN THE TRAFFIC PATTERN. NO CONFLICTING STRIPES, PAVEMENT MARKINGS OR LEGENDS SHALL BE BLACKED OUT WITH PAINT.
7. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES.
8. ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE, UNLESS NOTED OTHERWISE. ALL W20-1, W20-5, AND W4-2 SIGNS SHALL BE MINIMUM 30" x 30".
9. ALL DRUMS SHALL BE 36" MINIMUM HEIGHT, PORTABLE, WITH REFLECTORIZED 4" - 6" WHITE AND ORANGE STRIPES, WITH WEIGHTED BASES OR BALLAST RINGS. DRUMS SHALL BE MADE OF A FLEXIBLE MATERIAL, 18" - 36" IN DIAMETER AND SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY. DRUMS FOR NIGHT TIME USE SHALL BE PROVIDED WITH FLASHING WARNING LIGHTS.
10. TYPE II BARRICADES MAY BE USED IN ADDITION TO THE DRUMS, AT THE DISCRETION OF THE CONTRACTOR, WHEN THEY ARE INTENDED TO PROVIDE ADDITIONAL EMPHASIS IN AREAS WHERE WORKERS ARE PRESENT.
11. USE AND PLACEMENT OF FLASHING ARROW BOARD(S) AND CHANGEABLE MESSAGE SIGN(S) SHALL BE AS DIRECTED BY THE ENGINEER.
12. THE CONTRACTOR SHALL MAINTAIN, ON A 24-HOUR BASIS, ALL SIGNS, DRUMS, BARRICADES, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC.
13. THE CONTRACTOR SHALL UTILIZE FLAGGERS DURING WORK HOURS AS DEEMED NECESSARY BY THE ENGINEER.
14. THE CONTRACTOR SHALL HAVE ALL SIGNS, DRUMS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION AND BEFORE ATTEMPTING TO SWITCH TO A SUBSEQUENT STAGE DURING WORK HOURS.
15. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING BUSINESSES AND PROPERTY OWNERS.
16. CONSTRUCTION TRUCK TRAFFIC MERGING INTO TRAFFIC LANES SHALL BE DONE BY USE OF FLAGGER AND APPROPRIATE SIGNAGE AS DIRECTED BY ENGINEER.
17. FLASHING ARROW SIGNS (FAS) AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONFORM TO THE SPECIAL PROVISIONS AND BE EITHER SOLAR OR BATTERY OPERATED. GASOLINE AND DIESEL POWERED FAS AND PCMS ARE PROHIBITED.
18. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND REFLECTORIZED PER CALTRANS SPECIFICATIONS UNLESS OTHERWISE NOTED.
19. FOR CONSTRUCTION PHASE 1, THE CONTRACTOR SHALL INSTALL TEMPORARY REFLECTIVE TABBING AFTER THE COMPLETION OF THE OVERLAY. FOR CONSTRUCTION PHASE 2, THE CONTRACTOR SHALL INSTALL ALL FINAL STRIPING, PAVEMENT MARKINGS, AND RAISED PAVEMENT MARKERS AFTER THE FINAL OVERLAY.
20. NO TWO CONSECUTIVE CROSS STREETS SHALL BE SIMULTANEOUSLY CLOSED FOR CONSTRUCTION.
21. ALL WORK IN EACH PHASE SHALL BE COMPLETE BEFORE WORK IN ANOTHER PHASE MAY BEGIN.
22. NEW CONCRETE CURB AND GUTTER, SIDEWALKS, DRIVEWAYS, AND ACCESS RAMPS AT ALL INTERSECTIONS SHALL BE COMPLETE AND IN PLACE PRIOR TO THE START OF ANY PAVEMENT RECONSTRUCTION.
23. TRAFFIC SIGNALS (EXISTING, NEW, OR TEMPORARY) SHALL BE IN OPERATION AT ALL TIMES AT SIGNALIZED INTERSECTIONS.
24. ALL CONFLICTING SIGNAL HEADS SHALL BE COVERED DURING LONG TERM CLOSURE WHEN DIRECTED BY THE ENGINEER.
25. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) TO BE IN USE FOR THE DURATION OF THE PROJECT. USE, PLACEMENT, AND FLASHING MESSAGE TEXT SHALL BE AS DIRECTED BY THE ENGINEER. PAYMENT IS INCLUDED IN THE UNIT PRICE FOR "PORTABLE CHANGEABLE MESSAGE SIGNS".
26. TEMPORARY "NO PARKING -- TOW AWAY" SIGNS SHALL BE POSTED WITHIN AFFECTED CONSTRUCTION AREAS A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
27. THE CONTRACTOR SHALL PROVIDE FOR 24 HOUR ACCESS TO ALL ADJACENT PROPERTIES. THIS SHALL INCLUDE BUT NOT BE LIMITED TO DRIVEWAYS AND WALKWAYS, EXCEPT AS INDICATED ON THESE PLANS AND IN THE SPECIFICATIONS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE POSSIBLE TO ABUTTING PROPERTY OWNERS/OPERATORS.
28. ALL PROPERTIES THAT HAVE ACCESS ADJACENT TO THE WORK AREA SHALL BE NOTIFIED OF ACCESS RESTRICTIONS (IN WRITING 48 HOURS MINIMUM BEFORE START OF WORK). THE NOTIFICATION SHALL DESCRIBE THE ACCESS LIMITATIONS, DATES OF LIMITATION, AND GIVE THE APPROXIMATE DATE AND TIME OF ACCESS RESTORATION. NO ACCESS SHALL BE LIMITED DURING NON-WORKING HOURS EXCEPT AS APPROVED BY THE ENGINEER. NO WORK IS PERMITTED ON SUNDAYS OR HOLIDAYS UNLESS APPROVED BY THE CITY.
29. FLASHING YELLOW BEACONS, TYPE "B", SHALL BE USED ON ALL W20-1, C27 SIGNS, AND ALL TYPE III BARRICADES GUARDING THE WORK AREA OVERNIGHT.
30. UNEVEN PAVEMENT SIGN(S) (W8-11) SHALL BE PLACED WHERE UNEVENNESS IN PAVEMENT DUE TO CONSTRUCTION OPERATIONS OCCUR.
31. THE CONTRACTOR SHALL PROVIDE FOR SAFE PEDESTRIAN ACCESS AT ALL TIMES. TEMPORARY PEDESTRIAN ACCESS SHALL BE 5' MINIMUM WIDTH. ANY AND ALL PEDESTRIAN DETOUR ROUTES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE DETOUR ROUTE IS ESTABLISHED.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF TRAFFIC SIGNAL LOOP-SENSORS AND SIGNAL AND INTERCONNECT CONDUITS. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPLACE DAMAGED CITY FACILITY AT NO COST TO THE CITY.
33. THE FOLLOWING AGENCIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY DETOUR AND/OR CONSTRUCTION ACTIVITIES.

CITY OF TORRANCE	(310) 781-6900
POLICE (GIVE LOCATION AND DURATION)	(310) 618-5557
FIRE DEPARTMENT	(310) 781-7042

TRAFFIC CONTROL PLAN SHEET INDEX

PHASE	WORK	SHEETS
1	PARKWAY & PCC MISC. IMPROVEMENTS	N/A
2	OUTSIDE LANE GRINDING, LOCALIZED RECON. & PAVING	12-13
3	INSIDE LANE GRINDING, LOCALIZED RECON. & PAVING	14-15
4	TRAFFIC STRIPING, SIGNING & SIGNAL IMPROVEMENTS	N/A

TRAFFIC SIGN LEGEND:



PORTABLE CHANGEABLE MESSAGE SIGNS:

1. CONTRACTOR SHALL PROGRAM EACH STREEN OF ALL PORTABLE CHANGEABLE MESSAGE SIGNS TO FLASH FOR TWO SECONDS.

** TWO WEEKS PRIOR TO CONSTRUCTION

SCREEN 1	SCREEN 2
ROADWORK	STARTING
AHEAD	MONDAY
	JUN XXXX

** DURING CONSTRUCTION

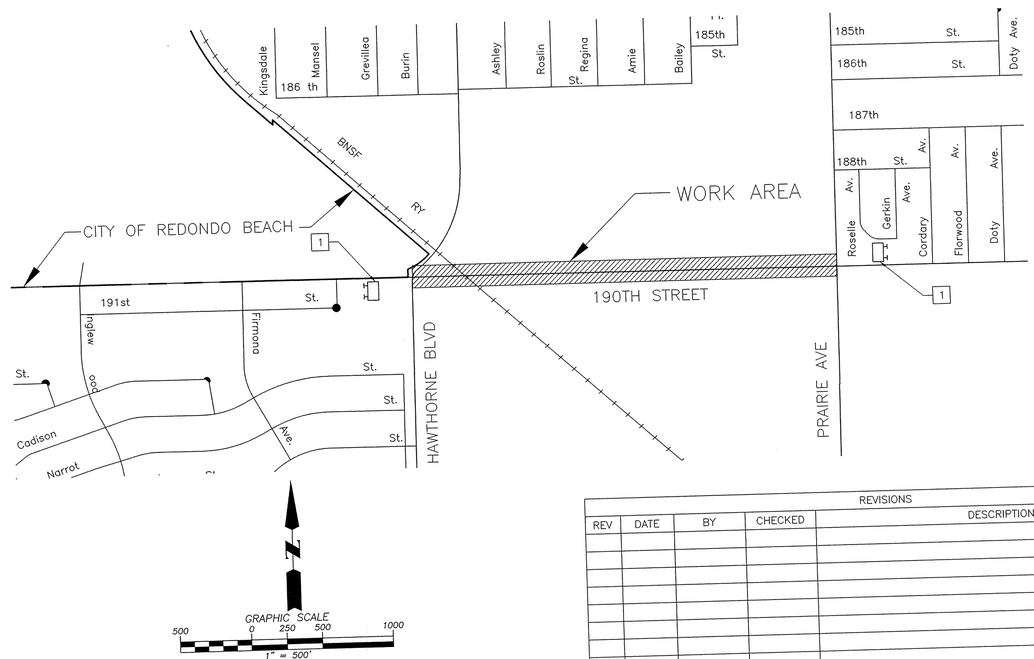
SCREEN 1	SCREEN 2
ROADWORK	EXPECT
AHEAD	DELAYS

TRAFFIC CONTROL LEGEND:

- TYPE II BARRICADE
- TYPE II BARRICADE WITH FLASHER
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- TYPE A ARROW BOARD
- (S) SIGNALIZED INTERSECTION

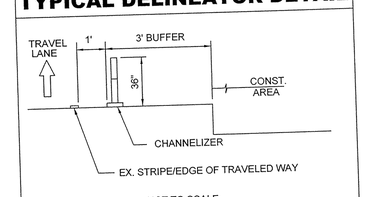
TRAFFIC CONTROL CONSTRUCTION NOTES:

1 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN TWO WEEKS PRIOR TO ANY CONSTRUCTION, COORDINATE EXACT LOCATION AND VERBIAGE WITH CITY ENGINEER.



GRAPHIC SCALE
500 0 250 500 1000
1" = 500'

TYPICAL DELINEATOR DETAIL



NOT TO SCALE

TRAFFIC PHASING NOTES

PHASE 0: PARKWAY PCC & MISC IMPROVEMENTS

SCOPE OF WORK:
- LOCALIZED PCC CURB RAMP, SIDEWALK AND CURB & GUTTER REPLACEMENTS
- REPAIR OF LOCALIZED MISCELANEOUS PARKWAY IMPROVEMENTS
- TRAFFIC SIGNAL CONDUIT, WIRING AND PULL BOX IMPROVEMENTS
- CONSTRUCT NEW PCC CURB & GUTTER, SIDEWALK AND PARKWAY IMPROVEMENTS

PHASE 1: OUTSIDE LANE GRINDING, LOCALIZED RECONSTRUCTIONS & PAVING

SCOPE OF WORK:
- PAVEMENT GRINDING
- IDENTIFICATION, REMOVAL AND REPLACEMENT OF LOCALIZED RECONSTRUCTION AREAS (DIG-OUTS)
- AC PAVEMENT OVERLAY

PHASE 2: INSIDE LANE GRINDING, LOCALIZED RECONSTRUCTIONS & PAVING

SCOPE OF WORK:
- PAVEMENT GRINDING
- IDENTIFICATION, REMOVAL AND REPLACEMENT OF LOCALIZED RECONSTRUCTION PATCHES
- AC PAVEMENT OVERLAY

PHASE 3: TRAFFIC STRIPING, & SIGNING

SCOPE OF WORK:
- INSTALL FINAL TRAFFIC SIGNING & STRIPING
- CONDUCT TRAFFIC SIGNAL UPGRADES
- INSTALL ADVANCED DETECTION TRAFFIC LOOPS
- CONDUCT JOBSITE CLEANUP AND CLOSEOUT

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BENCHMARK:
DEPARTMENT OF PUBLIC WORKS BENCHMARK TAG SOUTH CURB, 900MM WEST OF BCR @ SOUTHWEST CORNER OF TORRANCE BLVD AND HAWTHORNE BLVD. 25.6M WEST AND 17.4M SOUTH OF CENTERLINE INTERSECTION.

NAME:	ELEV. (FT)	ADJUSTMENT
Y 10263 (TORRANCE QUAD BOOK)	110.423	2000

BASIS OF COORDINATES:
THE BASIS OF BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN NGS DY1217 AND NGS DY2032 BEING N 78°50'33" E AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY.

NGS DY1217 N= 1,756,746.96 E= 6,443,217.91 C.F.= 1.00005334
NGS DY2032 N= 1,764,354.38 E= 6,481,788.17 C.F.= 1.00004744

PLANS PREPARED BY:
ONWARD ENGINEERING

PLANS PREPARED BY:
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
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F: (714) 808-1270
STEVE J. HOSFORD, PE, RCE 42280, EXP 03/31/14
3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER STEVE J. HOSFORD No. 42280 CIVIL STATE OF CALIFORNIA

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA 3/18/14 DATE

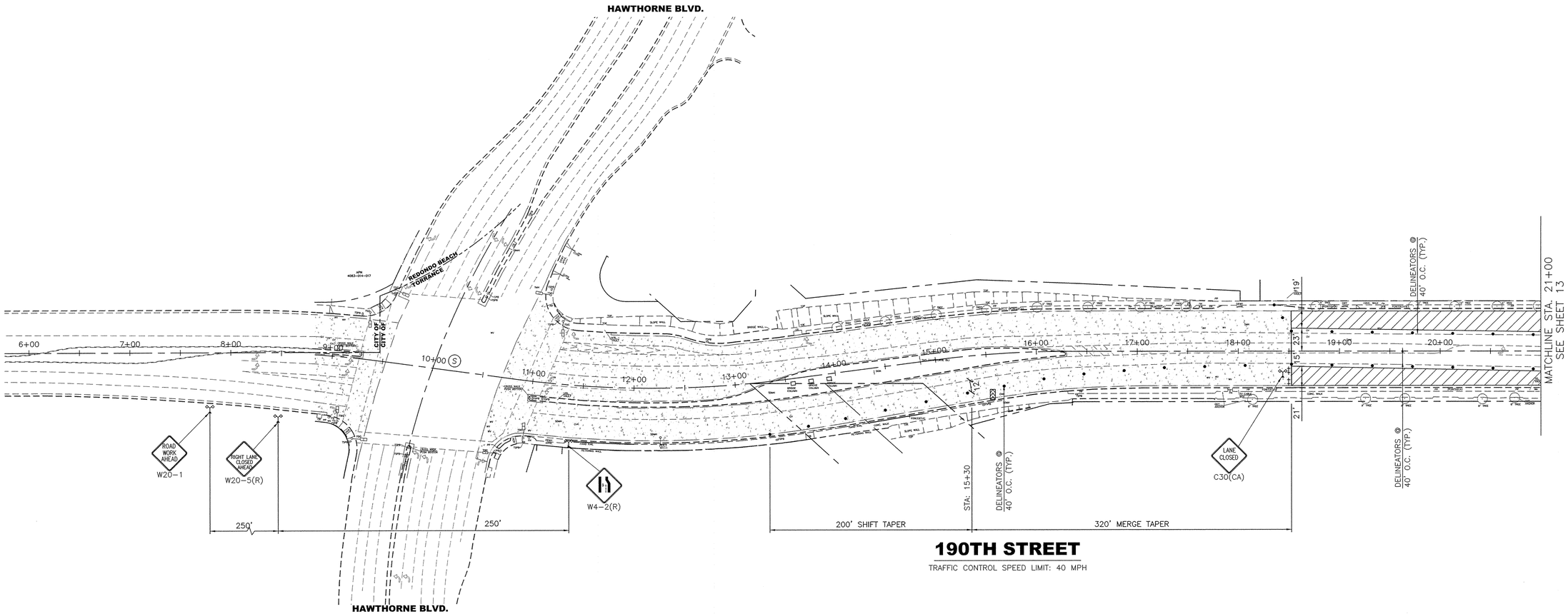
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC CONTROL PLANS
TITLE SHEET & GENERAL NOTES

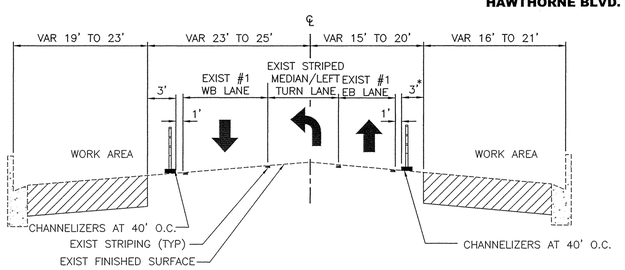
APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: 1"=40'
SHEET 11 OF 15
PLAN NO. ST-1063



190TH STREET

TRAFFIC CONTROL SPEED LIMIT: 40 MPH



*STA: 18+50-31+50 = 2'

PHASE 1 TYPICAL TRAFFIC CONTROL

STA 18+50 TO STA 21+00
N.T.S.

TRAFFIC SIGN LEGEND:

ROAD WORK AHEAD W20-1 | RIGHT LANE CLOSED AHEAD W20-5(R) | W4-2(R) | LANE CLOSED C30(CA)

TRAFFIC CONTROL LEGEND:

- TYPE II BARRICADE W/ TRAFFIC SIGN
- TYPE II BARRICADE WITH FLASHER
- TYPE III BARRICADE W/ TRAFFIC SIGN
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- TYPE A ARROW BOARD
- (S) SIGNALIZED INTERSECTION
- WORK AREA

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GRAPHIC SCALE
50 0 25 50 100
1" = 50'

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC CONTROL PLANS
PHASE 1 - OUTSIDE LANE PAVING

PLANS PREPARED BY:
ONWARD ENGINEERING

PLANS PREPARED BY:
ONWARD ENGINEERING
300 S. HARBOR BLVD., SUITE 814
ANAHEIM, CA 92805
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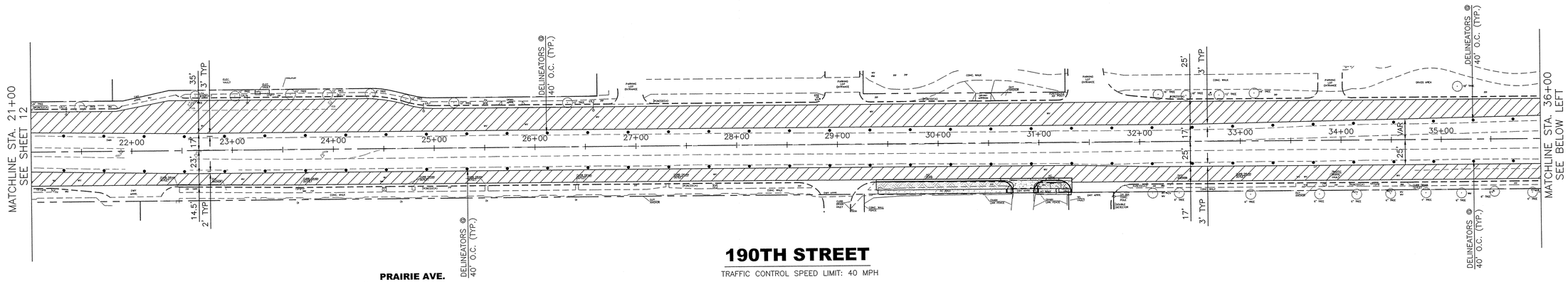
STEVE J. HOSFORD, PE, RCE 42280, EXP 03/31/14 — 3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER — STEVE J. HOSFORD — No. 42280 — CIVIL — STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — 3/18/14 DATE

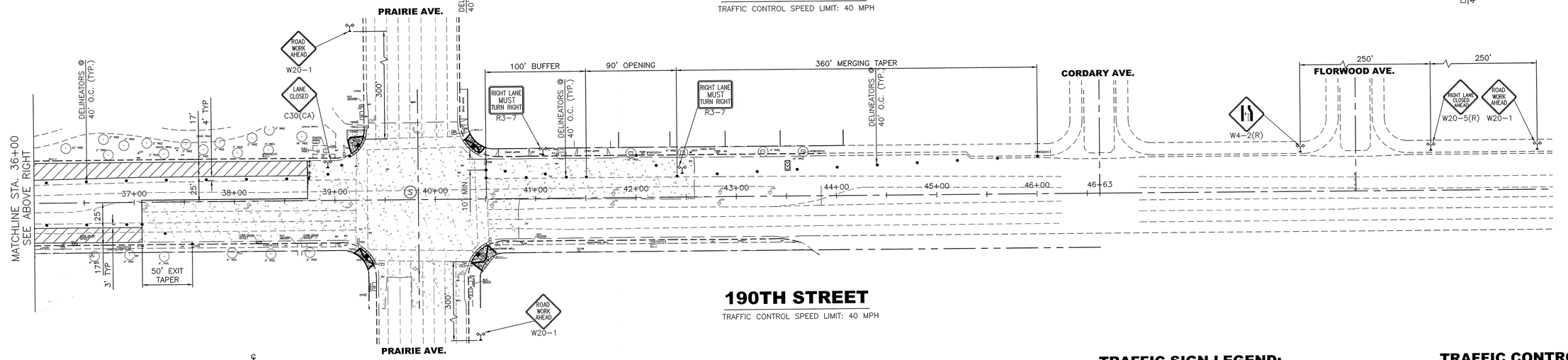
APPROVED BY: CRAIG BILEZERIAN, P.E. — 3/10/2014 DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)

SCALE: 1"=50'
SHEET 12 OF 15
PLAN NO. ST-1063



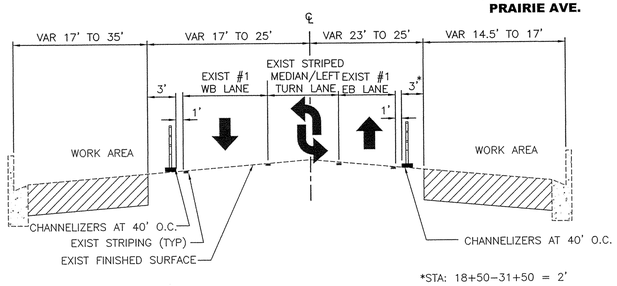
190TH STREET

TRAFFIC CONTROL SPEED LIMITS: 40 MPH



190TH STREET

TRAFFIC CONTROL SPEED LIMIT: 40 MPH



*STA: 18+50-31+50 = 2'

PHASE 1 TYPICAL TRAFFIC CONTROL

STA 21+00 TO STA 38+73
N.T.S.

TRAFFIC SIGN LEGEND:

W20-1	ROAD WORK AHEAD
W20-5(R)	RIGHT LANE CLOSED AHEAD
W4-2(R)	
R3-1	
R3-7	RIGHT LANE MUST TURN RIGHT
C30(CA)	LANE CLOSED

TRAFFIC CONTROL LEGEND:

- TYPE II BARRICADE W/ TRAFFIC SIGN
- TYPE II BARRICADE WITH FLASHER
- TYPE III BARRICADE W/ TRAFFIC SIGN
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- TYPE A ARROW BOARD
- SIGNALIZED INTERSECTION
- WORK AREA

GRAPHIC SCALE
50 0 25 50 100
1" = 50'

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TWO WORKING DAYS BEFORE YOU DIG

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC CONTROL PLANS
PHASE 1 - OUTSIDE LANE PAVING

PLANS PREPARED BY:
ONWARD ENGINEERING

PLANS PREPARED BY:
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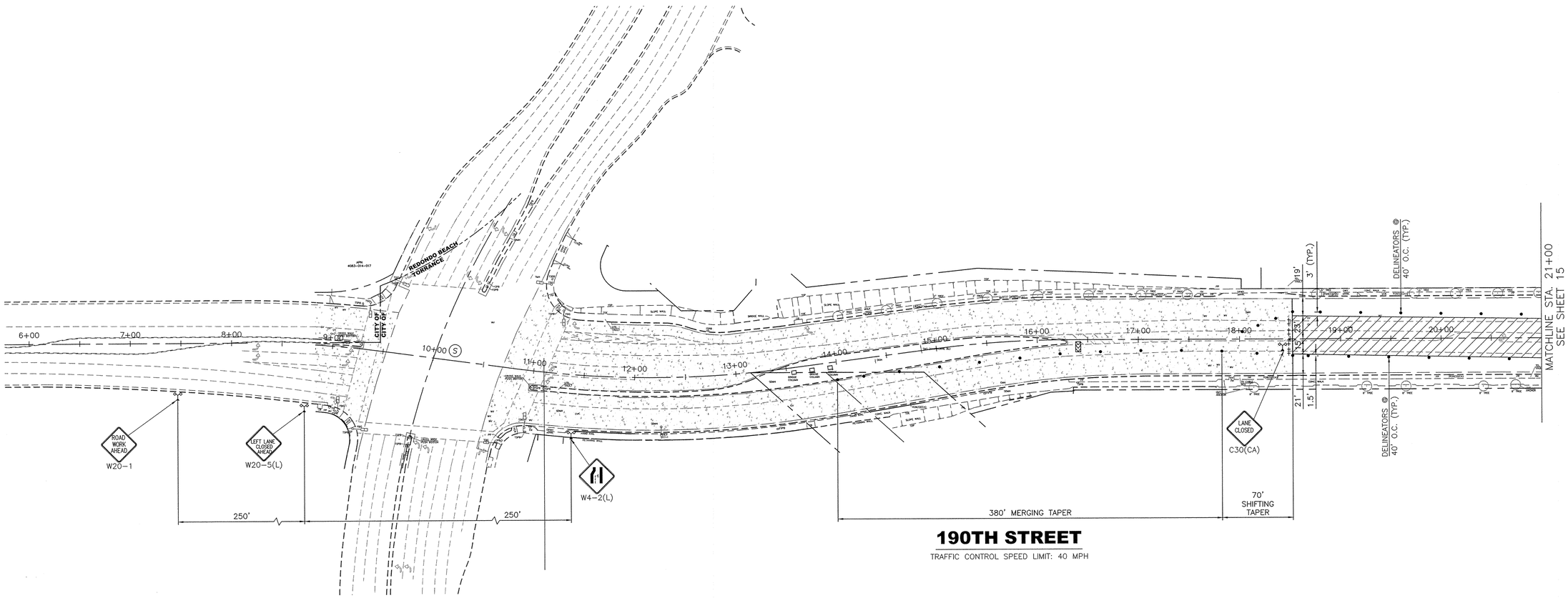
STEVE J. HOSFORD, PE, RCE 42280, EXP 03/31/14
3/10/14 DATE

REGISTERED PROFESSIONAL ENGINEER
STEVE J. HOSFORD
No. 42280
CIVIL
STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER:
DAVINA BUENAVISTA 3/18/14 DATE

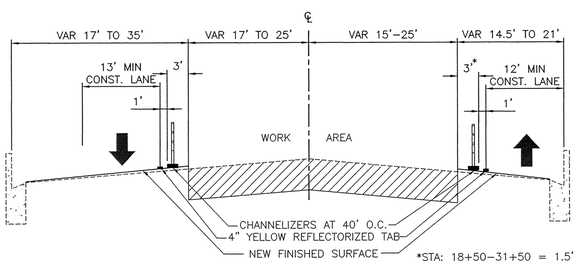
APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
3/18/2014 DATE

SCALE: 1"=50'
SHEET 13 OF 15
PLAN NO. ST-1063



190TH STREET

TRAFFIC CONTROL SPEED LIMIT: 40 MPH



PHASE 2 TYPICAL TRAFFIC CONTROL

STA 18+50 TO STA 39+00
N.T.S.

TRAFFIC SIGN LEGEND:

ROAD WORK AHEAD — W20-1
LEFT LANE CLOSED AHEAD — W20-5(L)
W4-2(L)
LANE CLOSED — C30(CA)

TRAFFIC CONTROL LEGEND:

- TYPE II BARRICADE W/ TRAFFIC SIGN
- TYPE II BARRICADE WITH FLASHER
- TYPE III BARRICADE W/ TRAFFIC SIGN
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- TYPE A ARROW BOARD
- (S) SIGNALIZED INTERSECTION
- WORK AREA

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GRAPHIC SCALE
50 0 25 50 100
1" = 50'

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC CONTROL PLANS
PHASE 2 - INSIDE LANE PAVING

PLANS PREPARED BY:
ONWARD ENGINEERING

PLANS PREPARED BY:
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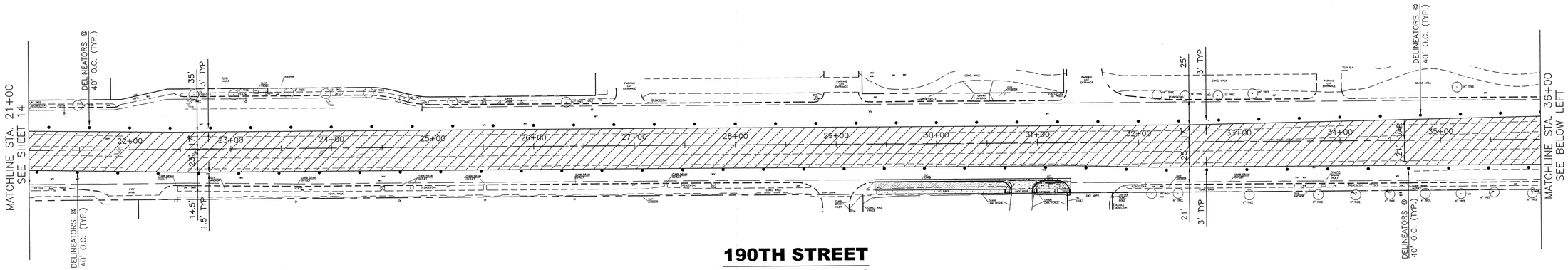
DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: DAVINA BUENAVISTA — DATE 3/10/14

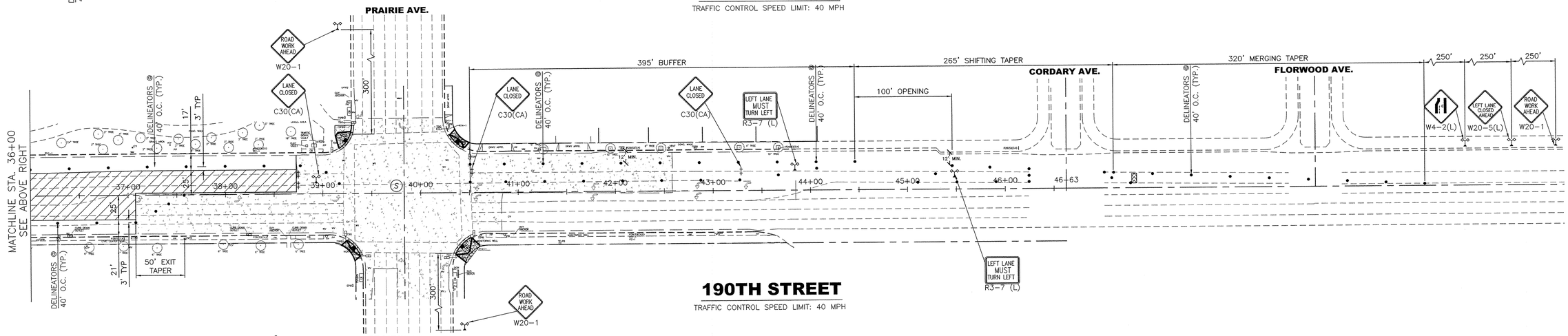
APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
DATE 3/10/2014

SCALE: 1"=50'
SHEET 14 OF 15
PLAN NO. ST-1063



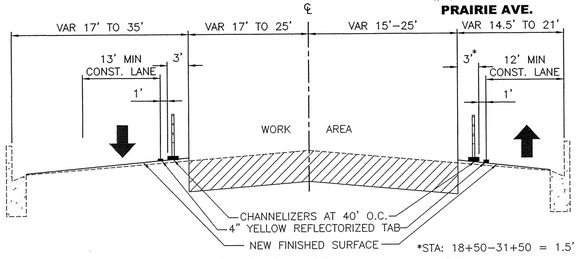
190TH STREET

TRAFFIC CONTROL SPEED LIMIT: 40 MPH



190TH STREET

TRAFFIC CONTROL SPEED LIMIT: 40 MPH



PHASE 2 TYPICAL TRAFFIC CONTROL

STA 18+50 TO STA 39+00
N.T.S.

TRAFFIC SIGN LEGEND:

- ROAD WORK AHEAD — W20-1
- LEFT LANE CLOSED AHEAD — W20-5(L)
- W4-2(L)
- LANE CLOSED — C30(CA)
- LEFT LANE MUST TURN LEFT — R3-7 (L)

TRAFFIC CONTROL LEGEND:

- TYPE II BARRICADE
- TYPE II BARRICADE WITH FLASHER
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- TYPE A ARROW BOARD
- SIGNALIZED INTERSECTION
- WORK AREA

GRAPHIC SCALE
50 0 25 50 100
1" = 50'

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

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REGISTERED PROFESSIONAL ENGINEER — STEVE J. HOSFORD — No. 42280 — CIVIL — STATE OF CALIFORNIA

DRAWN BY: DS
DESIGNED BY: DS
PROJECT ENGINEER: 3/18/14
DAVINA BUENAVISTA — DATE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

190TH STREET REHABILITATION, I-130
HAWTHORNE BOULEVARD TO PRAIRIE AVENUE

TRAFFIC CONTROL PLANS
PHASE 2 - INSIDE LANE PAVING

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2014)
DATE 3/18/2014

SCALE: 1"=50'
SHEET 15 OF 15
PLAN NO. ST-1063