TRAFFIC SIGNAL GENERAL NOTES

1. TRAFFIC SIGNAL, LIGHTING AND ELECTRICAL WORK SHALL CONFORM TO THE STANDARD PLANS PER CALTRANS LATEST STANDARD. SIGNAL POLE STANDARDS, SIGNAL MAST ARMS, LUMINAIRE MAST ARMS, STRIPING AND MARKINGS SHALL CONFORM TO THE STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
3. AT THE TIME THE SIGNAL TURN-ON, ALL SIGNAL EQUIPMENT SHALL OPERATE ACCORDING TO THE DESIGN SPECIFIED IN THE PLAN AND SPECIFICATIONS AND TO THE SATISFACTION OF THE ENGINEER IN THE FIELD.
4. LOCATE ALL SUBSTRUCTURES PRIOR TO CONSTRUCTION. DIG FOUNDATIONS UNTIL CLEAR OF OBSTRUCTIONS. COORDINATE POLE INSTALLATIONS WITH OVERHEAD AND UNDERGROUND UTILITY OWNERS. CONTACT UNDERGROUND SERVICE ALERT AT (800) 422-4133, 48 HOURS PRIOR TO CONSTRUCTION.
5. OBTAIN APPROVAL FROM CITY ENGINEER FOR EXACT EQUIPMENT LOCATION PRIOR TO FINAL PLACEMENT.
6. CONDUIT SHALL BE 1½ INCH SCHEDULE 80 PVC UNLESS SHOWN OTHERWISE.
7. PULL BOXES SHALL BE NO.5 AND REINFORCED CONCRETE, UNLESS SHOWN OTHERWISE. PULL BOX COVERS SHALL BE MARKED "TRAFFIC SIGNAL".
8. ALL WIRING SHALL BE MARKED (TAGGED) WITHIN THE CONTROLLER CABINET AND IN THE PULL BOXES FOR PHASE IDENTIFICATION. THE COLOR CODE OF THE WIRES SHALL FOLLOW CALTRANS STANDARDS.
9. RECTANGULAR RAPID FLASHING BEACONS (RRFBs) SHALL BE 7 INCH BY 3 INCH LED MODULE UNITS.
10. PEDESTRIAN PUSH BUTTONS SHALL BE TYPE "B" WITH R10-4B SIGNS AND SHALL MEET ALL ADA REQUIREMENTS.
11. INSTALLATION OF CONDUITS TO BE ACCOMPLISHED BY BORING METHOD.
12. CONTRACTOR SHALL BE RESPONSIBLE TO POT HOLE ALL AREAS PRIOR TO INSTALLATION OF NEW CABINETS, POLES OR CONDUIT RUNS THAT MIGHT BE IN CONFLICT WITH ANY UNDERGROUND UTILITY. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL POT HOLES THAT MIGHT BE REQUESTED BY THE CITY ENGINEER AT HIS OWN COST.
13. ALL WIRING SHALL BE PROTECTED IN CONDUITS OR PULL BOXES AS APPROPRIATE.

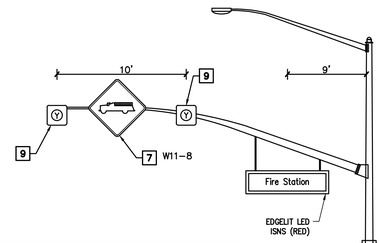
DETAIL "B"
(NTS)

SIGNING AND STRIPING GENERAL NOTES

1. SIGNING, MARKING AND STRIPING SHALL BE CONFORM TO THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), 2014 EDITION REV. 5 AND CALTRANS SPECS.
2. SIGNING AND STRIPING INSTALLATION SHALL NOT BE DONE WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER. ALL STRIPING CAT-TRACKING AND SIGN LAYOUT SHALL BE INSPECTED BEFORE STRIPING INSTALLATION. CONTACT THE ENGINEER AT LEAST 48 HOURS IN ADVANCE BEFORE COMPLETING THE LAYOUT. THE CITY ENGINEER MUST APPROVE ANY CHANGES DUE TO PLAN DISCREPANCIES OR REVISIONS.
3. ALL CONFLICTING STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED BY WET SAND BLASTING OR OTHER APPROVED METHODS PRIOR TO INSTALLATION OF NEW STRIPING. ALL CONFLICTING RAISED PAVEMENT MARKERS SHALL BE REMOVED.
4. PAVEMENT DAMAGED DUE TO REMOVAL OF MARKERS OR STRIPING SHALL BE REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER.
5. THE CONTRACTOR SHALL CONTACT THE CITY OF MANHATTAN BEACH FOR INSPECTION 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION.
6. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. IF CONDITIONS EXIST WHICH ARE CONTRARY TO THOSE SHOWN ON PLANS, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK.
7. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE REFLECTORIZED AND APPLIED IN THERMOPLASTIC.
8. ALL STRIPING SHALL INCLUDE RAISED PAVEMENT MARKERS (RPMs) PER APPROPRIATE CALTRANS STANDARD PLANS DETAILS.
9. LANE WIDTHS SHALL BE MEASURED BETWEEN THE CENTER LINES OF EACH ADJACENT SINGLE OR DOUBLE STRIPE OR TOP OF CURB AS APPROPRIATE.
10. ALL LANE LINES AT INTERSECTION APPROACHES AND DEPARTURE SHALL BEGIN AND END WITH 50 FEET OF CONTINUOUS STRIPING.
11. ALL SIGN FACE REFLECTIVE SHEETING SHALL BE HIGH INTENSITY GRADE WITH PROTECTIVE OVERLAY FILM AND SHALL BE DIAMOND GRADE SHEETING WITH GRAFFITTI FILM.
12. SIGN POSTS SHALL BE "UNISTRUT" SQUARE GALVANIZED STEEL POSTS WITH BREAKAWAY ANCHOR POST OR CITY APPROVED EQUAL AND CONSTRUCTED AS INDICATED ON THE PLAN.

EMERGENCY VEHICLE PRE-EMPTION AT FIRE STATION DRIVEWAY

1. BEACONS SHALL BE DARK BEFORE THE BEGINNING OF PRE-EMPTION.
2. EMERGENCY VEHICLE PRE-EMPTION IS ACTIVATED BY MOMENTARY PUSH BUTTONS AT THE FIRE STATION.
3. PUSH BUTTON 1 SHALL ACTIVATE WEST BOUND BEACON.
4. PUSH BUTTON 2 SHALL ACTIVATE EAST BOUND BEACON.
5. PUSH BUTTON 3 SHALL ACTIVATE BOTH WEST AND EAST BOUND BEACONS.
6. AT THE BEGINNING OF PRE-EMPTION, THE EMERGENCY-VEHICLE BEACON FACES SHALL EACH DISPLAY A FLASHING YELLOW SIGNAL INDICATION.
7. UPON COMPLETION OF PRE-EMPTION, THE EMERGENCY-VEHICLE BEACONS GO DARK.



DETAIL "A"
OVERHEAD FLASHING BEACON
(NTS)

CONDUCTOR SCHEDULE					
AWG	POLE	RUNS 1	2	3	4
12c / 3c	(A)	–	–	–	–
	(B)	1	1	–	–
	TOTAL	1	1	–	–
#10	LUMINAIRES	2	2	–	–
#12	ISNS	2	2	–	–
#14	MPB PRE-EMPT	4	4	8	8
	CONDUIT SIZE	3"	3"	2"	2"

ALL CONDUITS SHALL BE NEW.

TRAFFIC SIGNAL CONSTRUCTION NOTES

1. FURNISH AND INSTALL POLE MOUNTED NEMA CONTROLLER.
2. FURNISH AND INSTALL 3" PVC CONDUIT WITH 2#6, 1#8,4#10, AND 4#12 CONDUCTORS SCHEDULED WITH PULL ROPE FROM SERVICE CABINET. CONTRACTOR SHALL SERVICE PLANNER AT (760) 218-0683 FOR SERVICE INSTALLATION.
3. INSTALL NEW EMERGENCY PRE-EMPTION BOX WITH PUSH BUTTONS, DETAIL B.
4. INSTALL NEW NO. 5 PULL BOX PER CALTRANS STD. ES-8A.
5. CONNECT TO EXISTING SERVICE CABINET.
6. INSTALL 2" CONDUIT WITH #14 CONDUCTOR CABLES TO THE PROPOSED PUSH BUTTON IN THE FIRE STATION.
7. FURNISH AND INSTALL SIGN ON MAST ARM PER CALTRANS ES-7F. MOUNTING SHALL BE PER CALTRANS STD. ES-7N.
8. INSTALL NEW OVERHEAD FLASHING BEACON, DETAIL A.
9. FURNISH AND INSTALL 12" ALTERNATE FLASHING BEACON WITH YELLOW INDICATIONS AND BACKPLATE.
10. REMOVE EXISTING TREE AND ROOTS

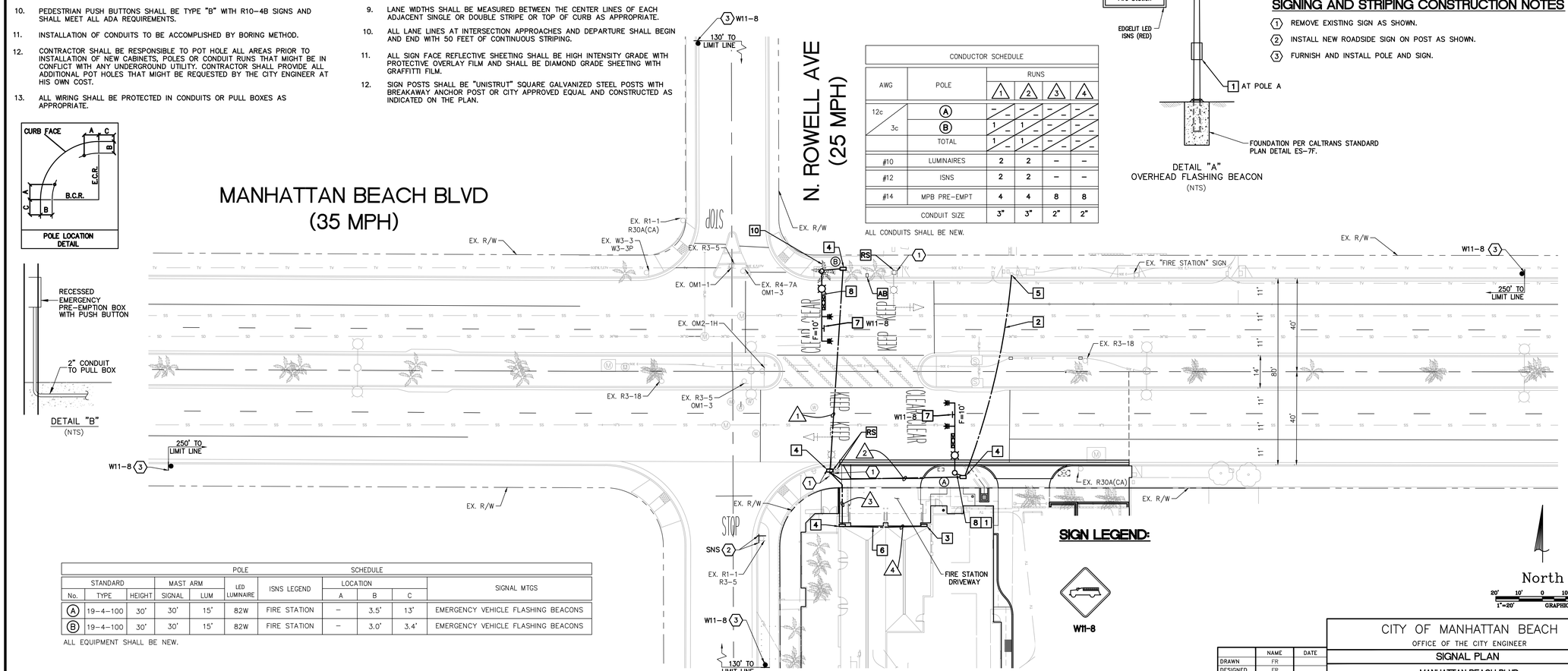
AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS

CB INSTALL CONDUIT INTO PULL BOX.

RS REMOVE AND SALVAGE TRAFFIC SIGNAL POLE, CABINET, PED PUSH BUTTON, VEHICLE HEADS, PED HEAD AND/OR LUMINAIRE. REMOVE FOUNDATION COMPLETE.

SIGNING AND STRIPING CONSTRUCTION NOTES

1. REMOVE EXISTING SIGN AS SHOWN.
2. INSTALL NEW ROADSIDE SIGN ON POST AS SHOWN.
3. FURNISH AND INSTALL POLE AND SIGN.



SIGN LEGEND:

W11-8

North
20' 10' 0 10' 20'
1"=20' GRAPHIC SCALE

POLE SCHEDULE									
STANDARD			MAST ARM		LED LUMINAIRE	ISNS LEGEND	LOCATION			SIGNAL MTGS
No.	TYPE	HEIGHT	SIGNAL	LUM			A	B	C	
(A)	19-4-100	30'	30'	15'	82W	FIRE STATION	–	3.5'	1.3'	EMERGENCY VEHICLE FLASHING BEACONS
(B)	19-4-100	30'	30'	15'	82W	FIRE STATION	–	3.0'	3.4'	EMERGENCY VEHICLE FLASHING BEACONS

ALL EQUIPMENT SHALL BE NEW.

	NAME	DATE
DRAWN	FR	
DESIGNED	FR	
CHECKED	MG	

Plan Prepared By:

4/13/2021
Date

KOA
3190 C. Shelby Street
Ontario, California 91764
Tel: (909) 890-9693 Fax: (909) 890-9694

CITY OF MANHATTAN BEACH
OFFICE OF THE CITY ENGINEER
SIGNAL PLAN
MANHATTAN BEACH BLVD
FIRE STATION No. 2

APPROVED: SEE SIGNATURE ON SHEET 1 — DATE CITY ENGINEER
APPROVED: SEE SIGNATURE ON SHEET 1 — DATE ACTING PUBLIC WORKS DIRECTOR

SCALE: HORIZ. AS NOTED, VERT. AS NOTED | F.B._____ PG._____ | SHEET 1 OF 1 SHEETS

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MANHATTAN BEACH FIRE STATION No. 2
MANHATTAN BEACH FIRE DEPARTMENT
1400 MANHATTAN BEACH BLVD., MANHATTAN BEACH, CA 90266

LICENSED ARCHITECT — KELLEY NEEDHAM — C-19064 — le'de 03/31/23 — STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER — MING GUAN — No. 75793 — Exp. 06/30/22 — CIVIL — STATE OF CALIFORNIA

CONSULTANT
KOA
3190 C. Shelby Street
Ontario, California 91764
Tel: (902) 890-2693 Fax: (909) 890-9694
MING GUAN R.C.E. 75793 — 4/13/2021 Date

NO	DATE	BY	DESCRIPTION
			REVISIONS

DRAWN: | CHECKED:
DATE: 04/13/2021 | SCALE: 1"=20'
PROJECT NUMBER: 1813300

TRAFFIC SIGNAL PLAN

DRAWING NUMBER: TS-01
SHEET 22 OF 132

J:\894061 MB_FS Subs to WLC\Signal\TS-01.dwg