

NEW JERSEY MEADOWLANDS COMMISSION

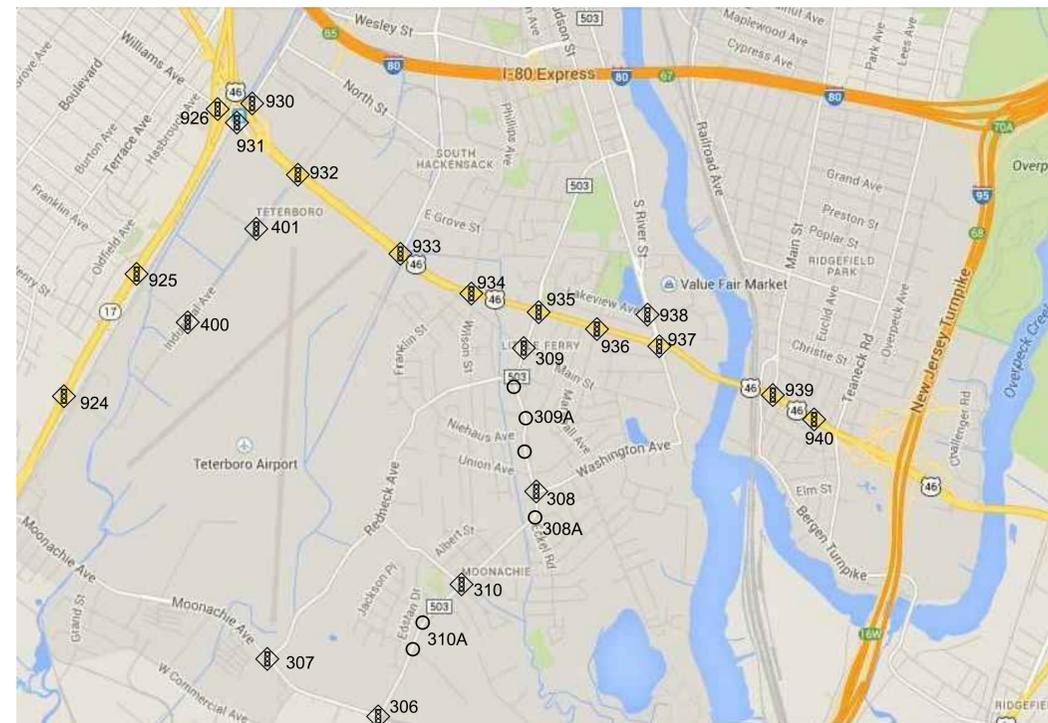
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION PHASE 5

MASSTR



BOROUGH OF LITTLE FERRY, BOROUGH OF MOONACHIE, TOWNSHIP OF
LYNDHURST, BOROUGH OF TETERBORO, TOWNSHIP OF SOUTH HACKENSACK,
VILLAGE OF RIDGEFIELD PARK & BOROUGH OF HASBROUCK HEIGHTS, BERGEN
COUNTY; TOWNSHIP OF NORTH BERGEN & TOWN OF SECAUCUS, HUDSON
COUNTY, NEW JERSEY
AUGUST 2014

INTERSECTION & PLAN INDEX			
INTERSECTION	NAME	ELECTRICAL	TRAFFIC CONTROL
308	Liberty and Washington	E-1	TCP-1
309A	Liberty Street Repeaters	E-1A	TCP-1A
309	Liberty and Main	E-2	TCP-2
308A	Liberty-Moonachie Repeaters	E-2A	TCP-2A
310	Moonachie and Joseph	E-3	TCP-3
310A	Moonachie Repeaters	E-3A	TCP-3A
401	Industrial and Teterboro Landing (Prop)	E-4	TCP-4
504	West Side & 69th	E-5	TCP-5
505	69th & Anpesil	E-6	TCP-6
615	Meadowland and Wood (Proposed)	E-7	TCP-7
911	Orient Way and Page Avenue	E-8	TCP-8
912	Orient Way and Marin/Vermella	E-9	TCP-9
913	Orient Way and Valley Brook	E-10	TCP-10
930	US 46 WB and Green (Proposed)	E-11	-
931	US 46 EB and Green (Proposed)	E-12	TCP-12
932	US 46 and Industrial	E-13	TCP-13
933	US 46 and Hulyer	E-14	TCP-14
934	US 46 and Phillips	E-15	TCP-15
935	US 46 and Liberty	E-16	TCP-16
936	US 46 and Grand	E-17	TCP-17 & 17A
937	US 46 and Bergen	E-18	TCP-18
938	Bergen and Lakeview	E-19	TCP-19
939	US 46 and Ridgefield	E-20	TCP-20
940	US 46 and Laurel	E-21	TCP-21
926	US 17 and Williams	E-22	-



KEY MAP
N.T.S.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2,3	GENERAL NOTES
4	ESTIMATE & DISTRIBUTION OF QUANTITIES
5-29	ELECTRICAL PLANS
30-53	TRAFFIC CONTROL PLANS
54	FIBER OPTIC COMMUNICATION SCHEMATIC
55-60	CONSTRUCTION DETAILS
61-66	ITS DETAILS

NOTICE:
LOCATIONS OF CONDUITS, JUNCTION BOXES, TRAFFIC SIGNAL POLES, ETC. AS SHOWN ON THE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE AND ARE NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL USE THE LOCATIONS OF THE CONDUITS, JUNCTION BOXES, TRAFFIC SIGNAL POLES, ETC. AS AN AID IN DETERMINING EXACT LOCATIONS.

NJDOT 2007 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND NJDOT 2007 STANDARD SPECIFICATIONS FOR ELECTRICAL MATERIAL AND CONSTRUCTION SHALL GOVERN EXCEPT FOR THE SPECIFICATIONS OF NON-STANDARD NJDOT ITEMS, CONTAINED IN THE SPECIFICATIONS OF THE PROJECT.

STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL BRIDGE CONSTRUCTION DETAILS BOOKLET 2007, AND STANDARD ELECTRICAL DETAILS BOOKLET 2007, ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

DAVID LIEBGOLD

NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 45897

HONG YUAN

NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 48481

LEOMAR ALMANZAR

NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 48348

LANE CLOSURE NOTES

U.S. 46

TWO LANES EACH DIRECTION

ALL LANES MAINTAINED
 MONDAY THROUGH FRIDAY 6:00AM TO 10:00AM, 2:00 PM TO 7:00 PM

ONE LANE MAINTAINED (ONE LANE CLOSED)

MONDAY THROUGH FRIDAY 10:00 AM TO 2:00 PM
 MONDAY THROUGH FRIDAY 7:00 PM TO 6:00 AM (NEXT DAY)

THREE LANES EACH DIRECTION

ALL LANES MAINTAINED
 MONDAY THROUGH FRIDAY 6:00 AM TO 9:00 AM, 3:00 PM TO 7:00PM

TWO LANES MAINTAINED (ONE LANE CLOSED)

MONDAY THROUGH FRIDAY 9:00AM TO 3:00PM
 MONDAY THROUGH FRIDAY 7:00PM TO 6:00AM (NEXT DAY)

ONE LANE MAINTAINED (TWO LANES CLOSED)

MONDAY THROUGH FRIDAY 8:00PM TO 5:00AM (NEXT DAY)

SHOULDER CLOSURES WILL BE PERMITTED AT ANY TIME WITH NO RESTRICTIONS DUE TO HOLIDAYS.
 THIS CORRESPONDS TO TEMPORARY CHANGES IN TRAFFIC PATTERNS THAT ARE NOT SHOWN ON THE
 CONSTRUCTION STAGING AND TRAFFIC CONTROL PLANS.
 THE WORKING HOURS LISTED ABOVE SHALL NOT APPLY IF THE RESIDENT ENGINEER DETERMINES THAT
 HAZARDHOUD TRAFFIC OPERATIONS WOULD RESULT.

NO LANE CLOSURES WILL BE PERMITTED ON THE FOLLOWING HOLIDAYS:

- EASTER SUNDAY (INCLUDING 6:00AM SATURDAY UNTIL NOON MONDAY)
- MEMORIAL DAY (SEE NOTE BELOW)
- JULY 4TH (SEE NOTE BELOW)
- LABOR DAY (SEE NOTE BELOW)
- ELECTION DAY (6:00AM UNTIL 8:00PM THE DAY OF)
- THANKSGIVING DAY (SEE NOTE BELOW)
- CHRISTMAS DAY (SEE NOTE BELOW)
- NEW YEARS DAY (SEE NOTE BELOW)

NOTE:

<u>IF HOLIDAY FALLS ON</u>	<u>NO LANE CLOSURES PERMITTED</u>
SUNDAY OR MONDAY	6:00 AM FRIDAY UNTIL NOON TUESDAY
TUESDAY	6:00 AM FRIDAY UNTIL NOON WEDNESDAY
WEDNESDAY	6:00 AM TUESDAY UNTIL NOON THURSDAY
THURSDAY	6:00 AM WEDNESDAY UNTIL NOON MONDAY
FRIDAY OR SATURDAY	6:00 AM THURSDAY UNTIL NOON MONDAY

REVISIONS:		
NO	DESCRIPTION	DATE

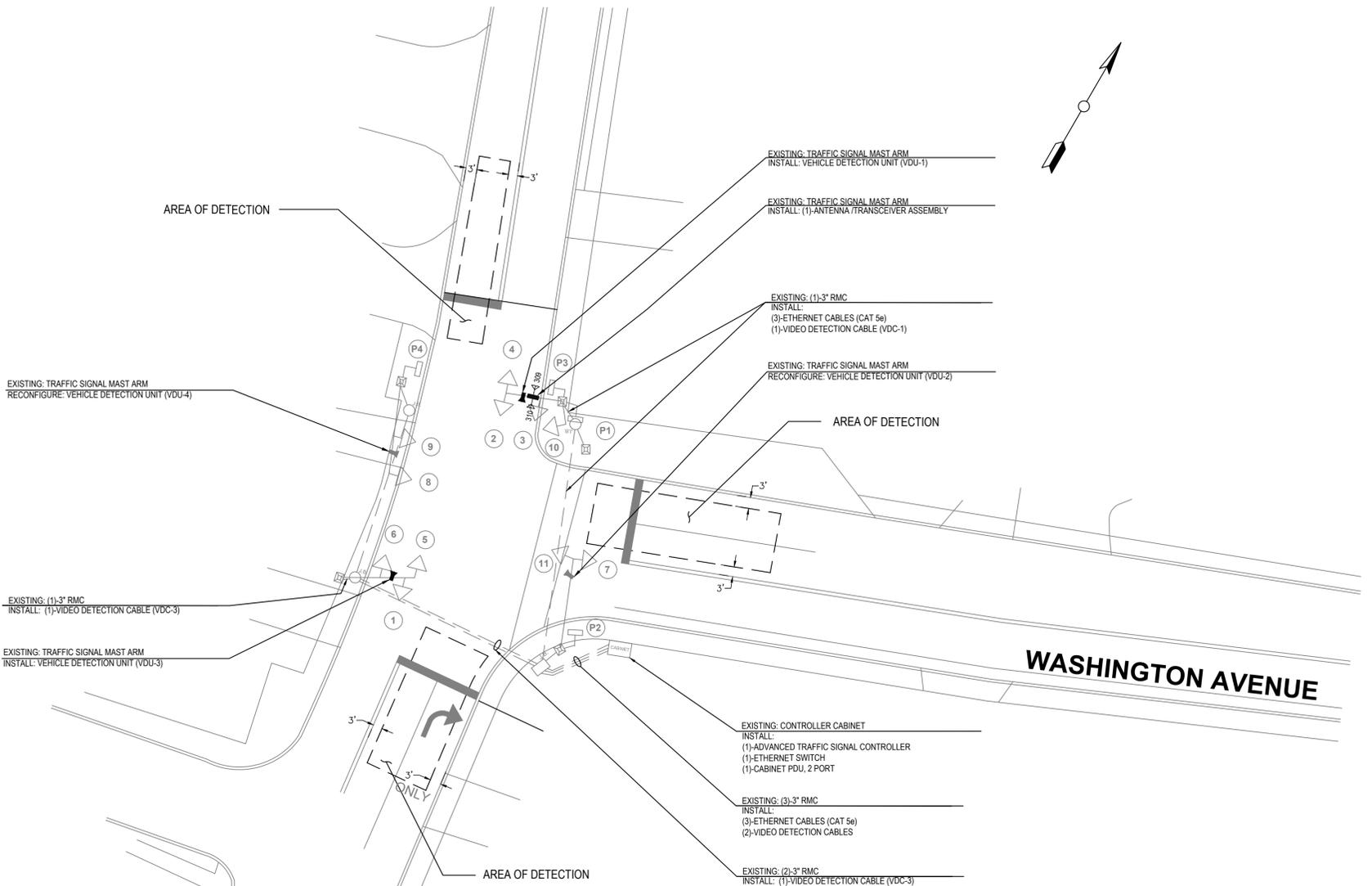
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

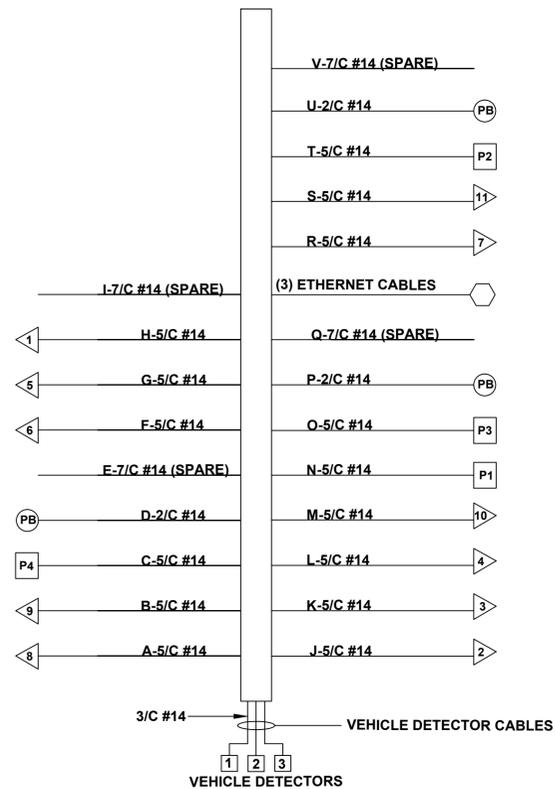
MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE46897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	GENERAL NOTES -2-
SCALE: N.T.S.	NJMC PROJECT: PHASE 5	SHEET #: 3 OF 66	

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	2 UNITS
221	VEHICLE DETECTION CABLE, 3/C #14	300 LF
242	RECONFIGURE EXISTING IMAGE DETECTION UNIT	2 UNITS
302	ANTENNA/TRANSCEIVER ASSEMBLY INSTALLATION	1 UNIT
311	ETHERNET CABLE (CAT 5e)	600 LF
313	ETHERNET SWITCH	1 UNIT
318	CABINET PDU, 2 PORT	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT



BLOCK WIRING DIAGRAM



NOTE:
 ORIGINAL ELECTRICAL PLAN TITLED "ELECTRICAL PLAN"
 PREPARED BY LAPATKA ASSOCIATES LAST REVISED 10-18-13

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

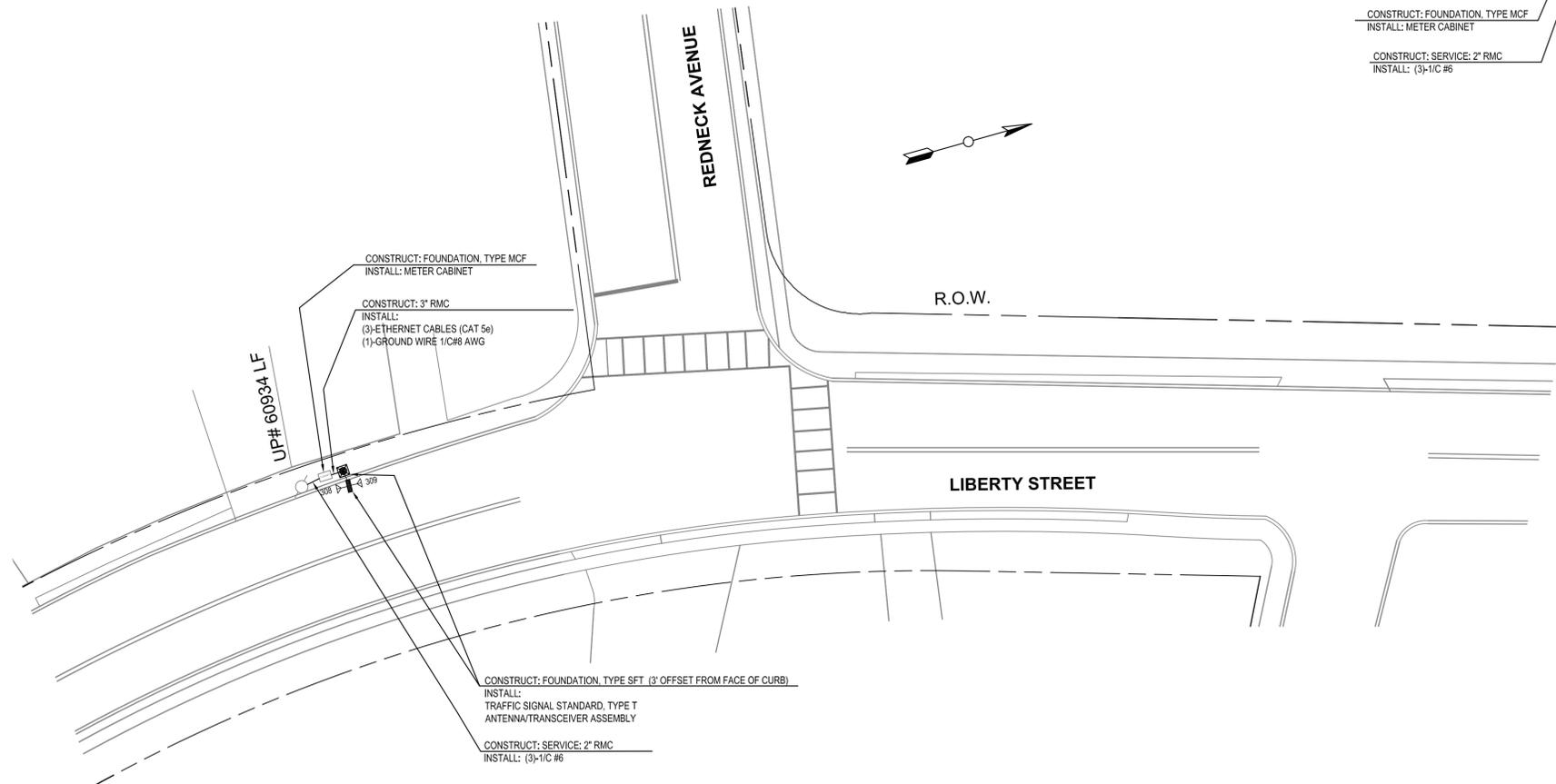
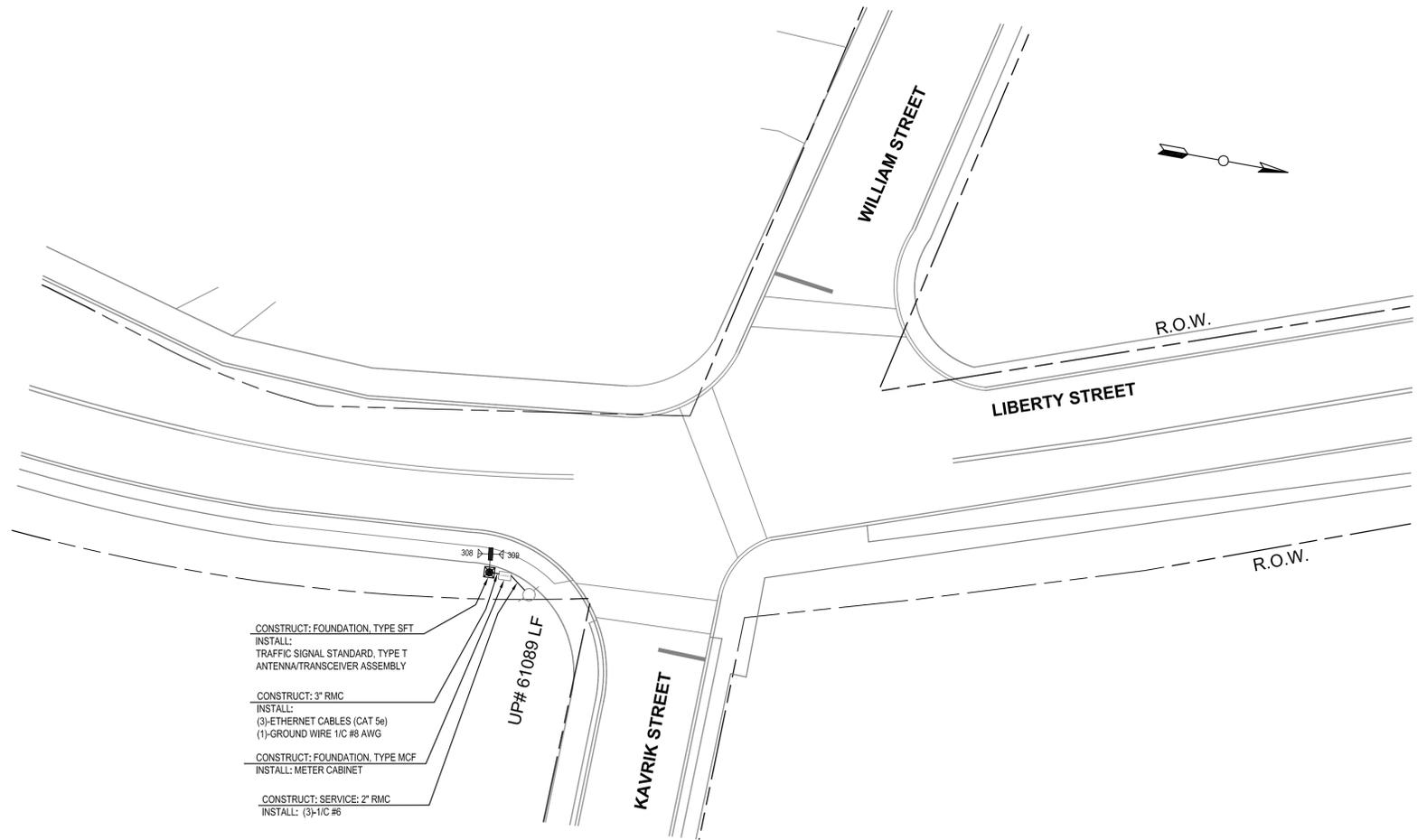
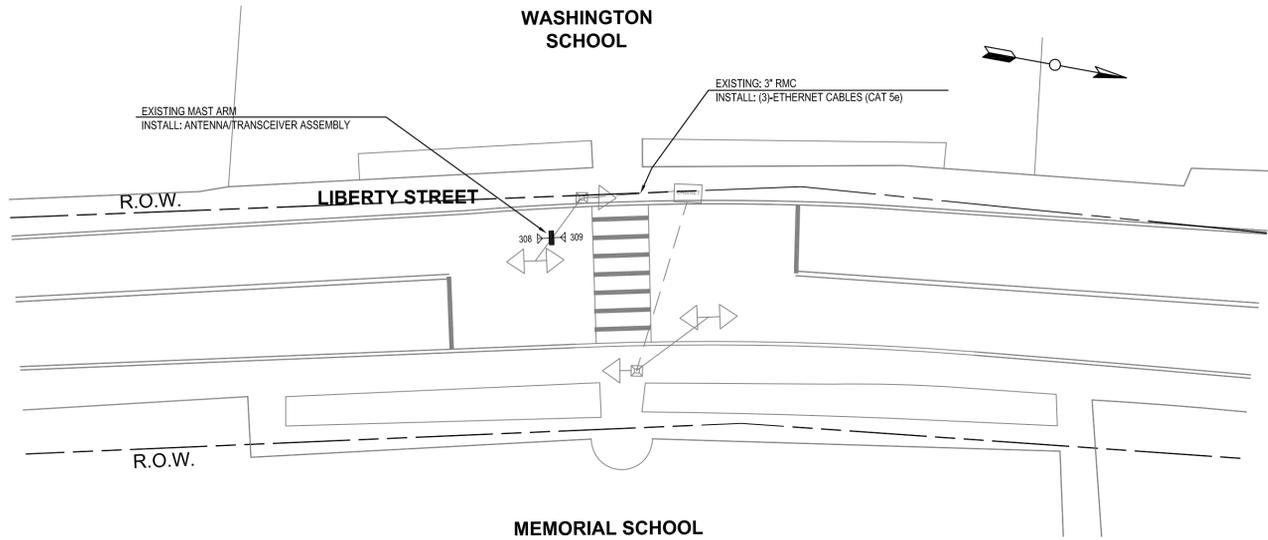
NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE488481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -1- 308: LIBERTY STREET & WASHINGTON AVENUE LITTLE FERRY BERGEN, NJ SCALE: 1"=20' N/JMC PROJECT: PHASE 5 SHEET #: 5 OF 66
--	---	--	---

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
302	ANTENNA/TRANSCEIVER ASSEMBLY	3 UNITS
311	ETHERNET CABLE (CAT 5e)	690 LF
602	2" RIGID METALLIC CONDUIT	40 LF
603	3" RIGID METALLIC CONDUIT	20 LF
612	METER CABINET, TYPE T	2 UNITS
614	FOUNDATION, TYPE MCF	2 UNITS
617	FOUNDATION, TYPE SFT	2 UNITS
619	TRAFFIC SIGNAL STANDARD, TYPE T	2 UNITS
621	SERVICE WIRE, NO. 6 AWG	330 LF
625	GROUND WIRE, NO. 8 AWG	30 LF



REVISIONS:		
NO.	DESCRIPTION	DATE

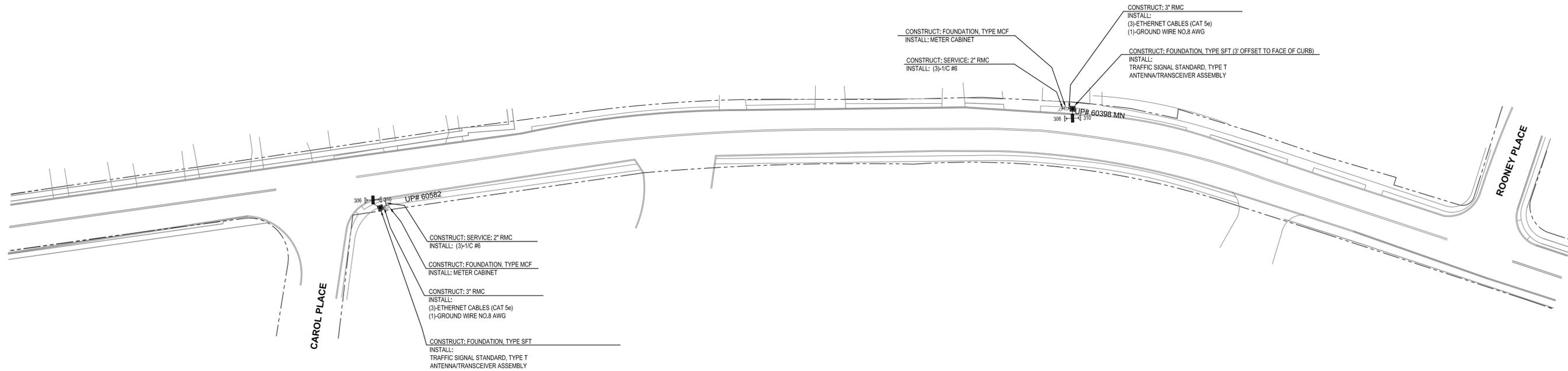
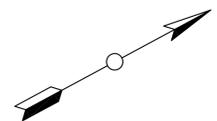
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48841	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -2A- 309A: LIBERTY STREET ANTENNA LOCATIONS LITTLE FERRY BERGEN, NJ SCALE: 1"=20' NIMC PROJECT: PHASE 5 SHEET #: 8 OF 66
--	--	--	--

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
302	ANTENNA/TRANSCEIVER ASSEMBLY	2 UNITS
311	ETHERNET CABLE (CAT 5e)	340 LF
602	2" RIGID METALLIC CONDUIT	30 LF
603	3" RIGID METALLIC CONDUIT	10 LF
612	METER CABINET, TYPE T	2 UNITS
614	FOUNDATION, TYPE MCF	2 UNITS
617	FOUNDATION, TYPE SFT	2 UNITS
619	TRAFFIC SIGNAL STANDARD, TYPE T	2 UNITS
621	SERVICE WIRE, NO. 6 AWG	330 LF
625	GROUND WIRE, NO. 8 AWG	20 LF



REVISIONS:		
NO.	DESCRIPTION	DATE

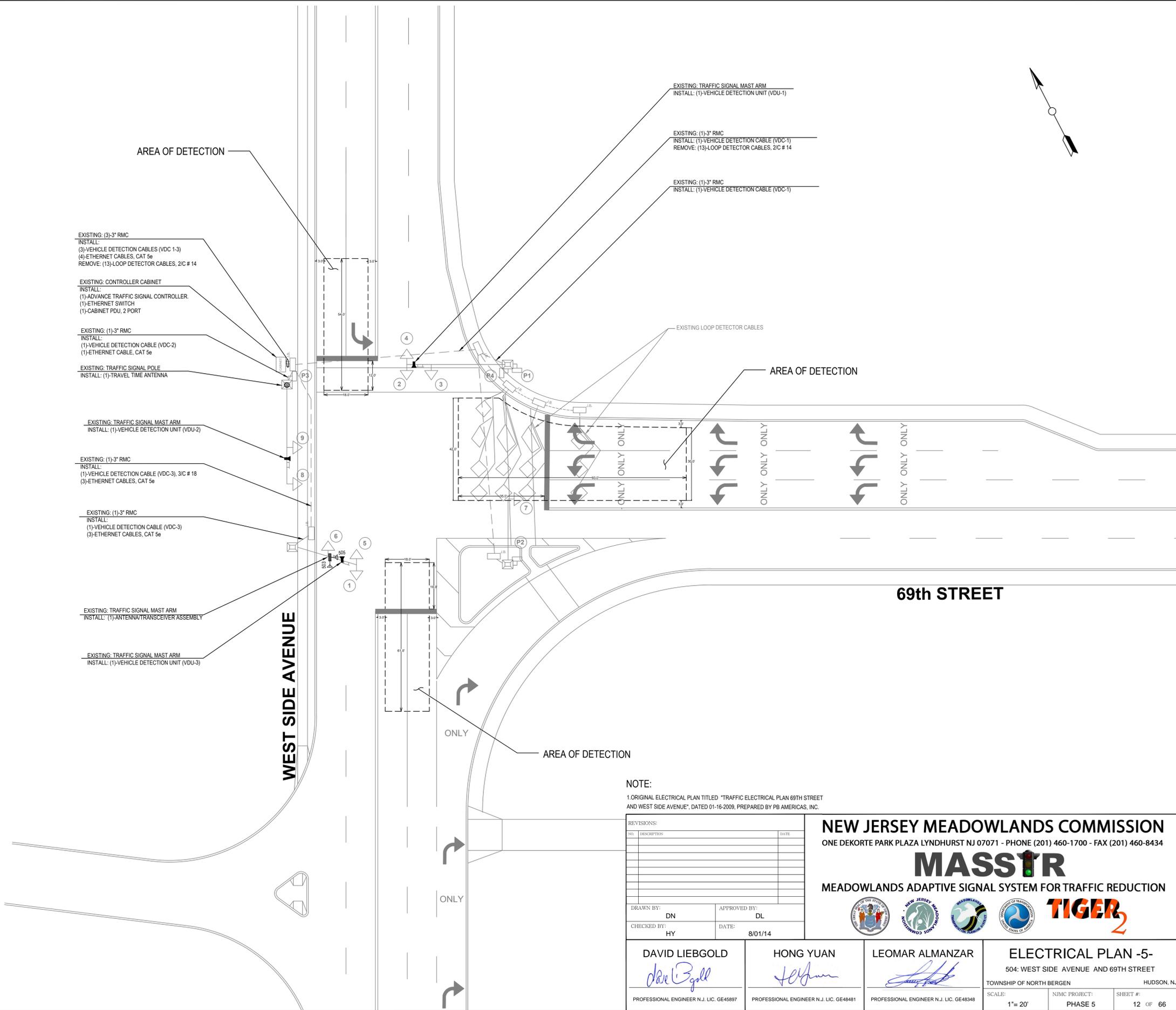
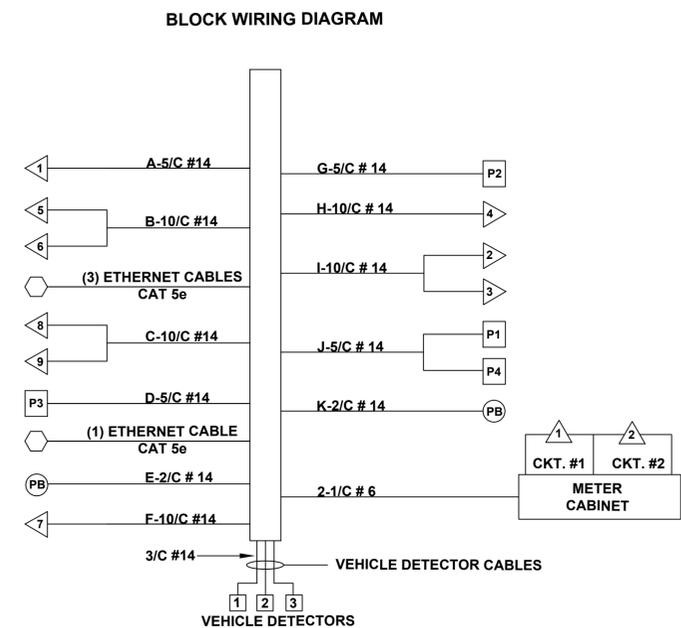
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -3A- 310A: MOONACHIE ROAD ANTENNA LOCATIONS MOONACHIE BERGEN, NJ SCALE: 1"=40' NIMC PROJECT: PHASE 5 SHEET #: 10 OF 66
--	--	--	--

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	3 UNITS
221	VEHICLE DETECTION CABLE, 3/C # 14	330 LF
234	TRAVEL TIME SYSTEM INSTALLATION	1 UNIT
302	ANTENNA/TRANSCIEVER ASSEMBLY INSTALLATION	1 UNIT
311	ETHERNET CABLE, CAT 5e	640 LF
313	ETHERNET SWITCH	1 UNIT
318	CABINET PDU, 2 PORT	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT



NOTE:
 1. ORIGINAL ELECTRICAL PLAN TITLED "TRAFFIC ELECTRICAL PLAN 69TH STREET AND WEST SIDE AVENUE", DATED 01-16-2009, PREPARED BY PB AMERICAS, INC.

REVISIONS:		
NO.	DESCRIPTION	DATE

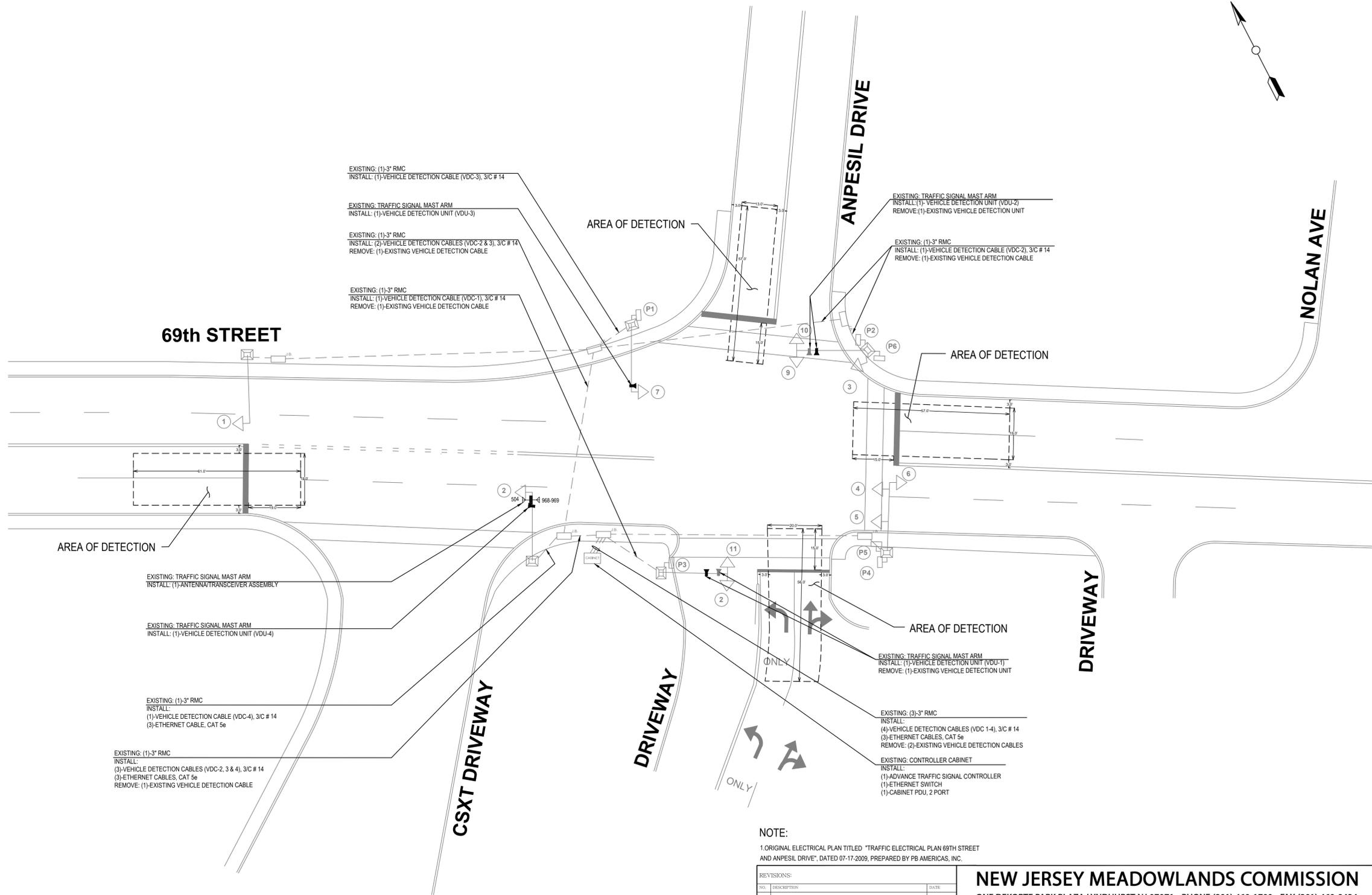
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

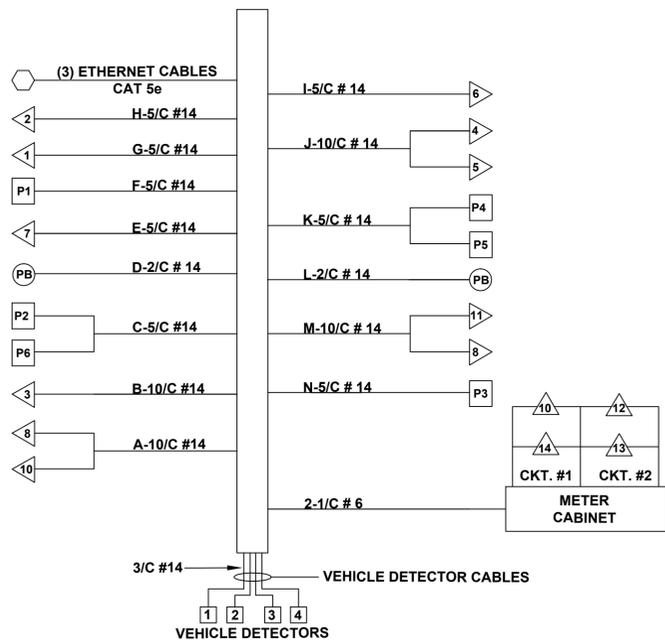
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48841	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -5- 504: WEST SIDE AVENUE AND 69TH STREET TOWNSHIP OF NORTH BERGEN HUDSON, NJ SCALE: 1"= 20' NJMC PROJECT: PHASE 5 SHEET #: 12 OF 66
--	--	--	--

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	4 UNITS
221	VEHICLE DETECTION CABLE, 3/C # 14	630 LF
241	REMOVAL OF EXISTING VEHICLE DETECTION UNIT	2 UNITS
302	ANTENNA/TRANSCIVER ASSEMBLY INSTALLATION	1 UNIT
311	ETHERNET CABLE, CAT 5e	400 LF
313	ETHERNET SWITCH	1 UNIT
318	CABINET PDU, 2 PORT	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT



BLOCK WIRING DIAGRAM



NOTE:

1 ORIGINAL ELECTRICAL PLAN TITLED "TRAFFIC ELECTRICAL PLAN 69TH STREET AND ANPESIL DRIVE", DATED 07-17-2009, PREPARED BY PB AMERICAS, INC.

REVISIONS:		
NO.	DESCRIPTION	DATE

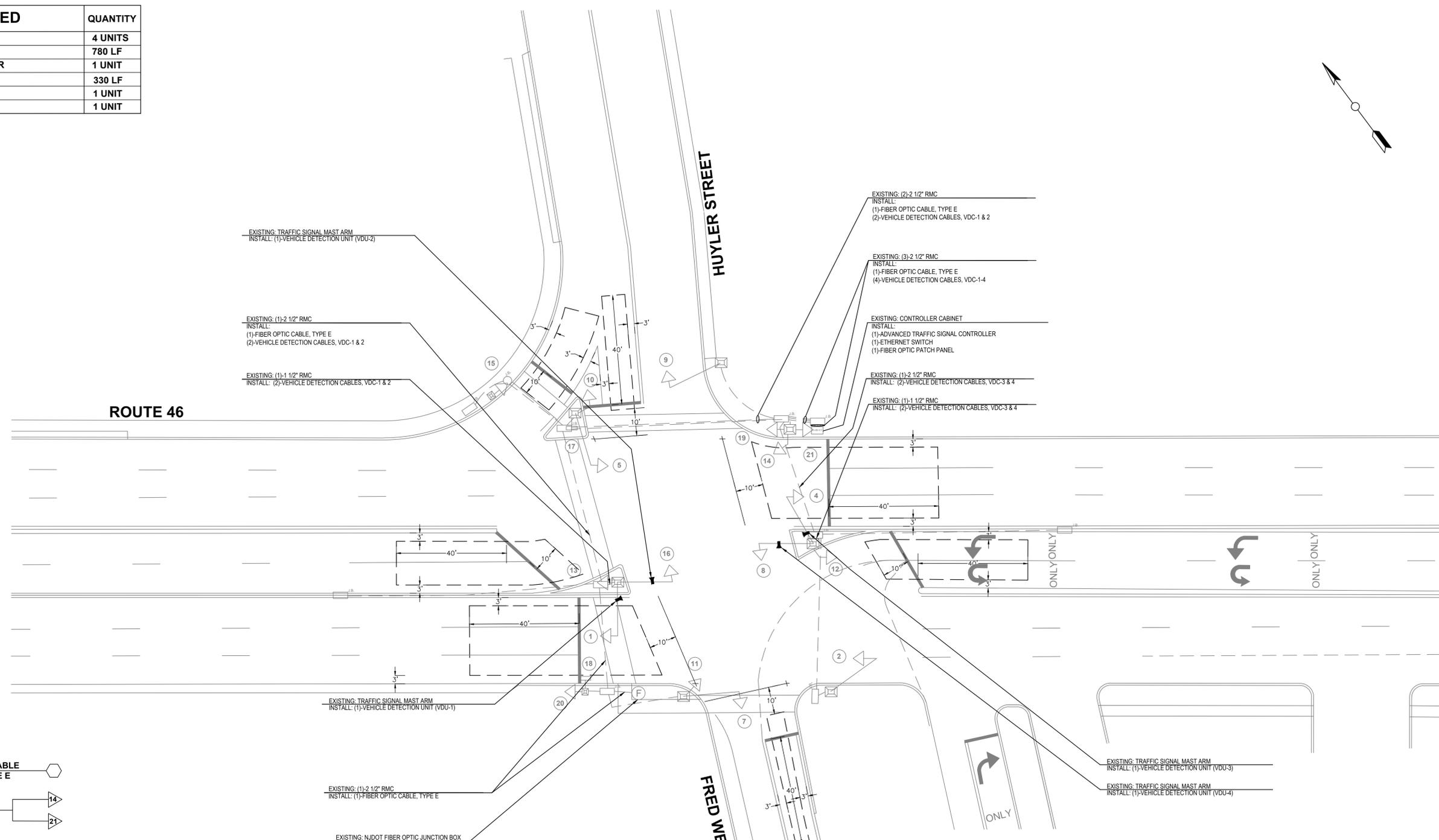
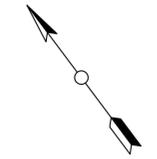
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

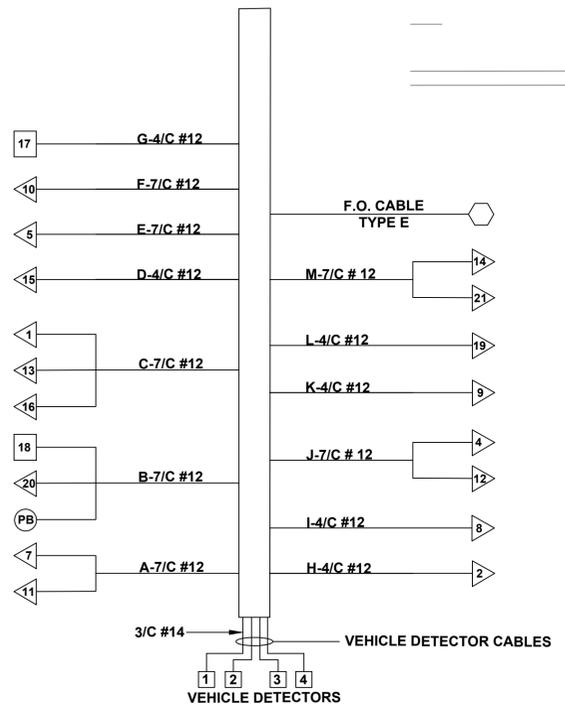


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48491	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -6- 505: 69TH STREET & ANPESIL DRIVE TOWNSHIP OF NORTH BERGEN HUDSON, NJ SCALE: 1"= 20' N.J.M.C. PROJECT: PHASE 5 SHEET #: 13 OF 66
--	--	--	---

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	4 UNITS
221	VEHICLE DETECTOR CABLE, 3/C #14	780 LF
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT
705	FIBER OPTIC CABLE, TYPE E	330 LF
711	FIBER OPTIC PATCH PANEL	1 UNIT
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT



BLOCK WIRING DIAGRAM



NOTE:
 ORIGINAL ELECTRICAL PLAN TITLED "ELECTRICAL PLANS."
 PREPARED BY NJDOT LAST REVISED 8-30-99

NO.	DESCRIPTION	DATE

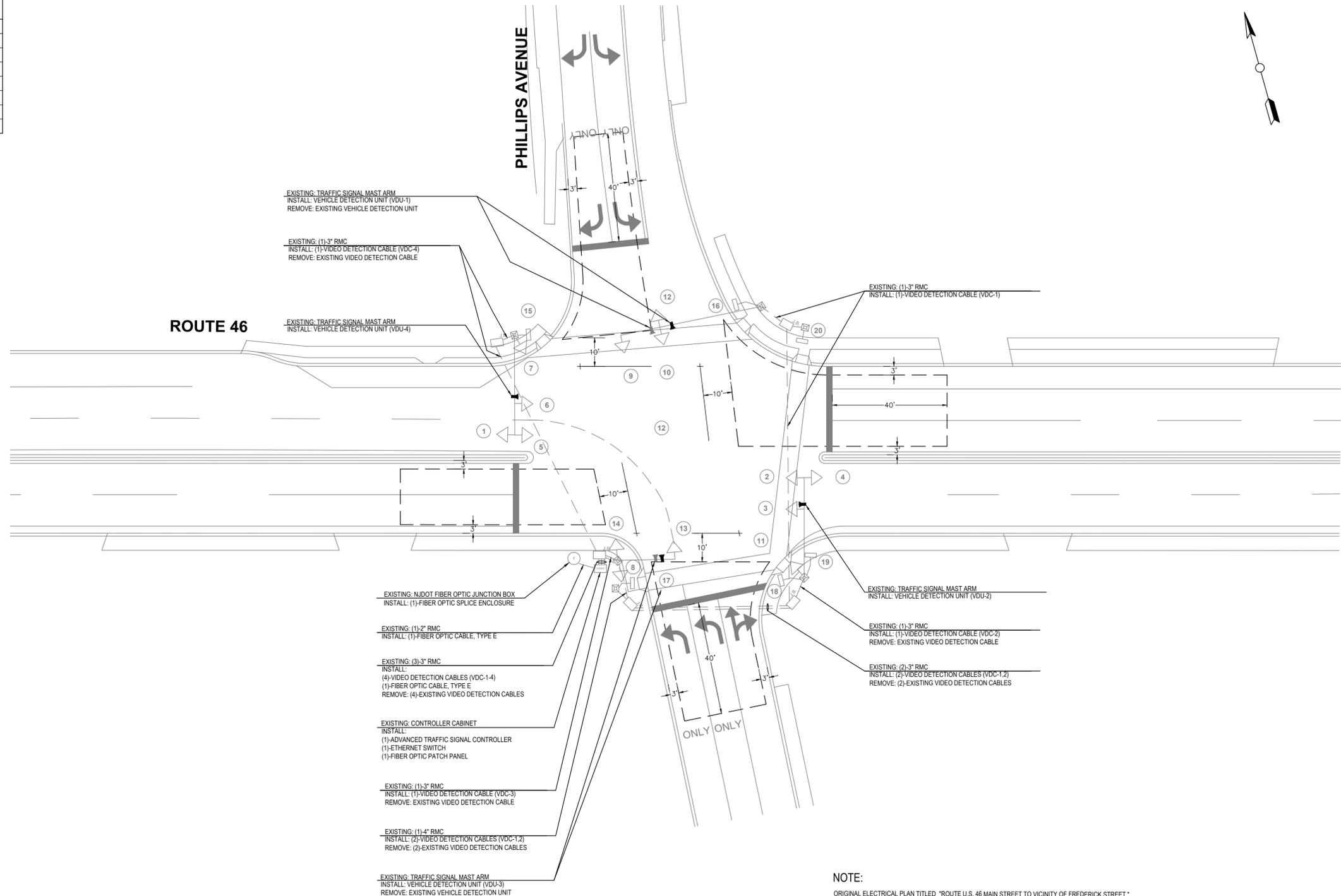
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

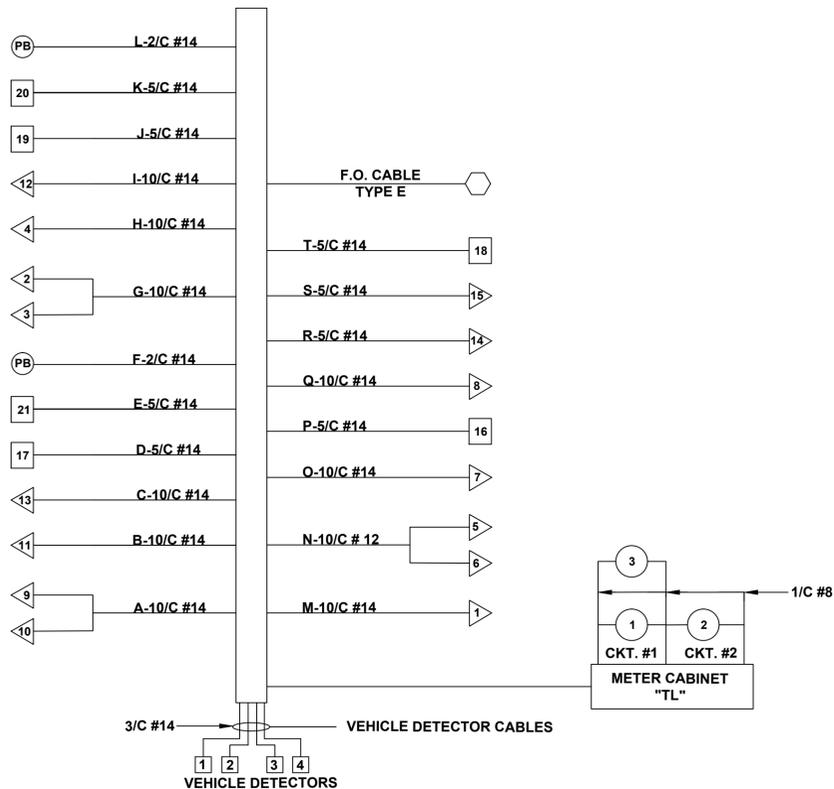
MASTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE483481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -14 933: ROUTE 46 & HUYLER STREET/FRED WEHRAN DRIVE TETERBORO/S. HACKENSACK/LITTLE FERRY BERGEN, NJ SCALE: 1"=20' NJMC PROJECT: PHASE 5 SHEET #: 21 OF 66
--	--	---	---

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	4 UNITS
221	VIDEO DETECTION CABLE, 3/C#14	640 LF
241	REMOVAL OF EXISTING VEHICLE DETECTION UNIT	2 UNITS
313	ETHERNET SWITCH	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT
705	FIBER OPTIC CABLE, TYPE E	60 LF
711	FIBER OPTIC PATCH PANEL	1 UNIT
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT



BLOCK WIRING DIAGRAM



- EXISTING: TRAFFIC SIGNAL MAST ARM
INSTALL: VEHICLE DETECTION UNIT (VDU-1)
REMOVE: EXISTING VEHICLE DETECTION UNIT
- EXISTING: (1)-3" RMC
INSTALL: (1)-VIDEO DETECTION CABLE (VDC-4)
REMOVE: EXISTING VIDEO DETECTION CABLE
- EXISTING: TRAFFIC SIGNAL MAST ARM
INSTALL: VEHICLE DETECTION UNIT (VDU-4)
- EXISTING: (1)-3" RMC
INSTALL: (1)-VIDEO DETECTION CABLE (VDC-1)
- EXISTING: NJDOT FIBER OPTIC JUNCTION BOX
INSTALL: (1)-FIBER OPTIC SPLICE ENCLOSURE
- EXISTING: (1)-2" RMC
INSTALL: (1)-FIBER OPTIC CABLE, TYPE E
- EXISTING: (3)-3" RMC
INSTALL:
(4)-VIDEO DETECTION CABLES (VDC-1-4)
(1)-FIBER OPTIC CABLE, TYPE E
REMOVE: (4)-EXISTING VIDEO DETECTION CABLES
- EXISTING: CONTROLLER CABINET
INSTALL:
(1)-ADVANCED TRAFFIC SIGNAL CONTROLLER
(1)-ETHERNET SWITCH
(1)-FIBER OPTIC PATCH PANEL
- EXISTING: (1)-3" RMC
INSTALL: (1)-VIDEO DETECTION CABLE (VDC-3)
REMOVE: EXISTING VIDEO DETECTION CABLE
- EXISTING: (1)-4" RMC
INSTALL: (2)-VIDEO DETECTION CABLES (VDC-1,2)
REMOVE: (2)-EXISTING VIDEO DETECTION CABLES
- EXISTING: TRAFFIC SIGNAL MAST ARM
INSTALL: VEHICLE DETECTION UNIT (VDU-3)
REMOVE: EXISTING VEHICLE DETECTION UNIT
- EXISTING: TRAFFIC SIGNAL MAST ARM
INSTALL: VEHICLE DETECTION UNIT (VDU-2)
- EXISTING: (1)-3" RMC
INSTALL: (1)-VIDEO DETECTION CABLE (VDC-2)
REMOVE: EXISTING VIDEO DETECTION CABLE
- EXISTING: (2)-3" RMC
INSTALL: (2)-VIDEO DETECTION CABLES (VDC-1,2)
REMOVE: (2)-EXISTING VIDEO DETECTION CABLES

NOTE:

ORIGINAL ELECTRICAL PLAN TITLED "ROUTE U.S. 46 MAIN STREET TO VICINITY OF FREDERICK STREET."
PREPARED BY PB AMERICAS, INC. 2010

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 7/25/14

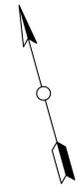
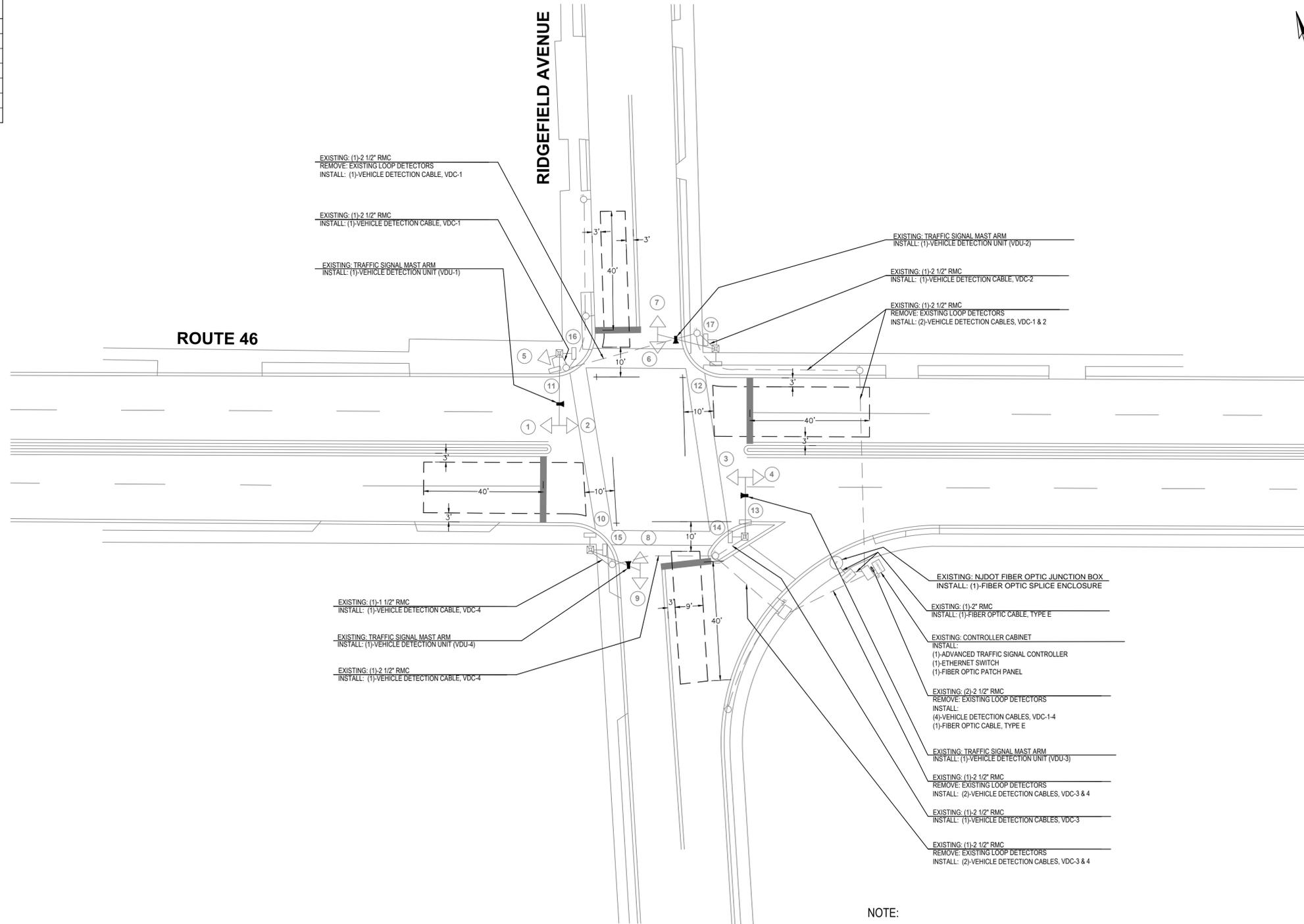
NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

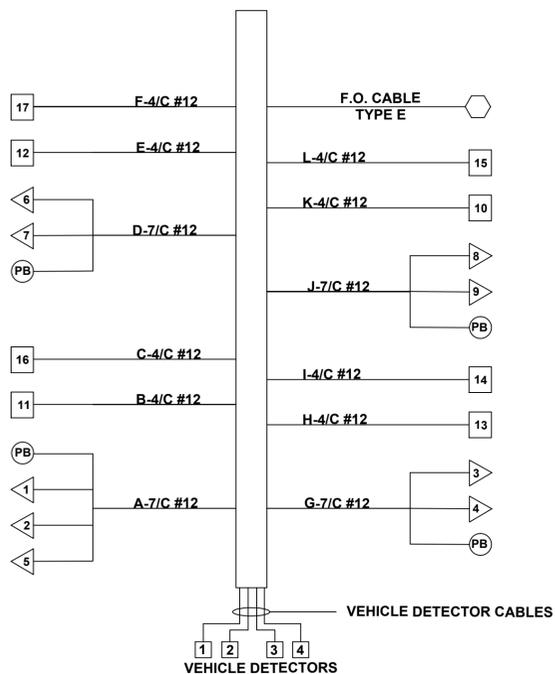


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48491	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -15- 934: ROUTE 46 & PHILLIPS AVENUE SOUTH HACKENSACK BERGEN, NJ SCALE: 1"=20' N/JMC PROJECT: PHASE 5 SHEET #: 22 OF 66
--	--	--	---

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	4 UNITS
221	VIDEO DETECTION CABLE, 3/C#14	850 LF
313	ETHERNET SWITCH	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT
705	FIBER OPTIC CABLE, TYPE E	60 LF
711	FIBER OPTIC PATCH PANEL	1 UNIT
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT



BLOCK WIRING DIAGRAM



NOTE:

ORIGINAL ELECTRICAL PLAN TITLED "ELECTRICAL PLANS, ROUTE 46 & RIDGEFIELD AVENUE"
PREPARED BY NJDOT LAST REVISED 5-19-11

NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

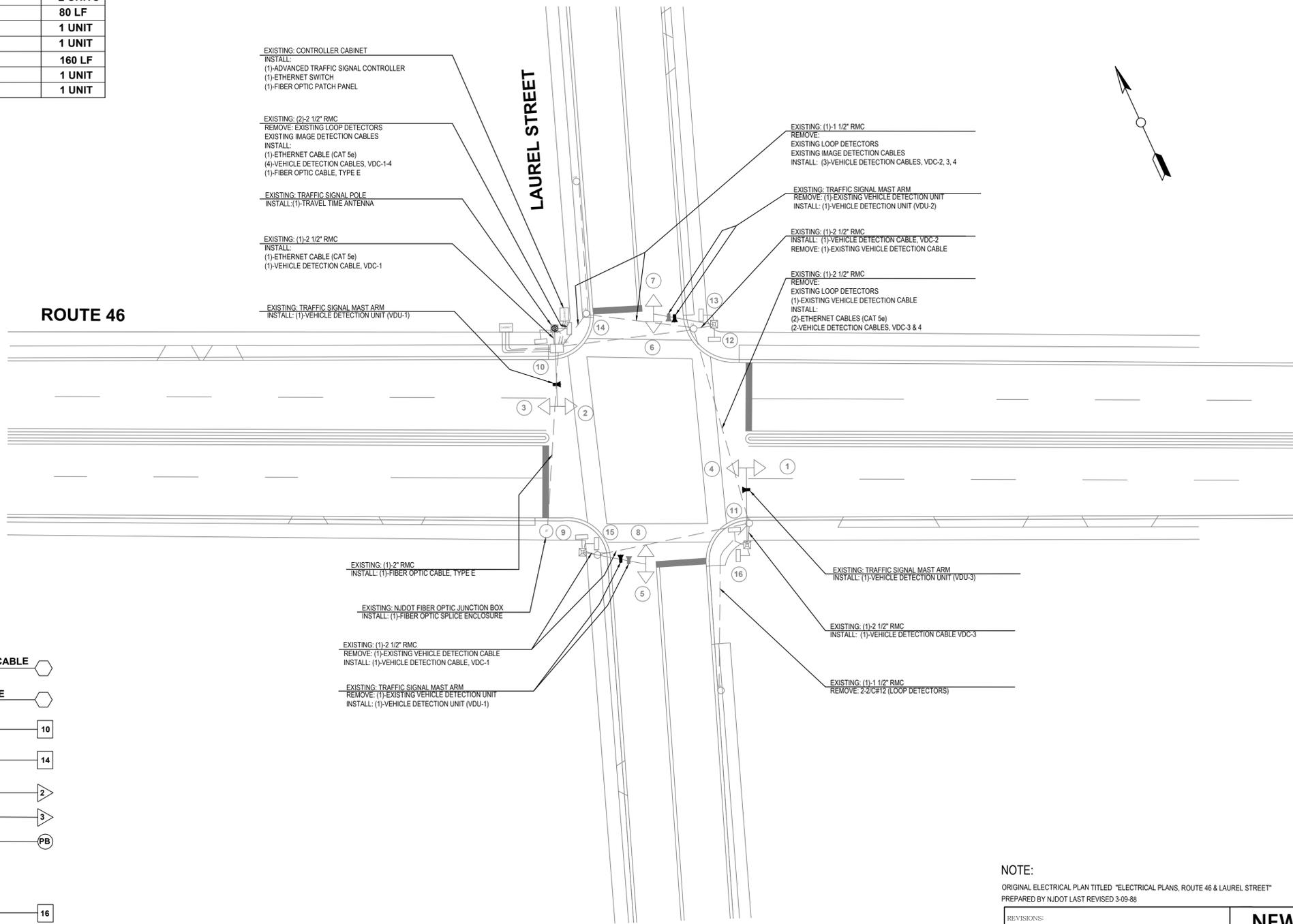
NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

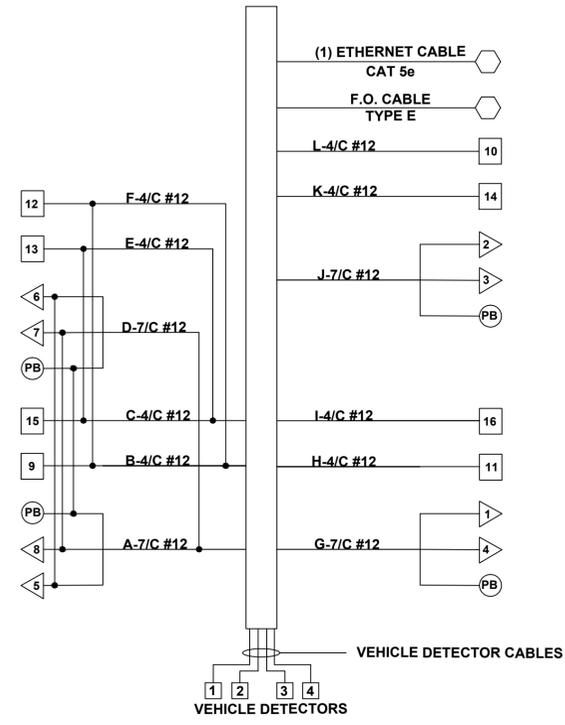


DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE46897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -20- 939: ROUTE 46 & RIDGEFIELD AVENUE RIDGEFIELD PARK BERGEN, NJ
SCALE: 1"=20'	NJMC PROJECT: PHASE 5	SHEET #: 27 OF 66	

ITEM NO.	TO BE CONSTRUCTED	QUANTITY
210	VEHICLE DETECTION UNIT INSTALLATION	4 UNITS
221	VIDEO DETECTION CABLE, 3/C#18	670 LF
234	TRAVEL TIME ANTENNA INSTALLATION	1 UNIT
241	REMOVAL OF EXISTING VEHICLE DETECTION UNIT	2 UNITS
311	ETHERNET CABLE (CAT 5e)	80 LF
313	ETHERNET SWITCH	1 UNIT
502	ADVANCED TRAFFIC SIGNAL CONTROLLER	1 UNIT
705	FIBER OPTIC CABLE, TYPE E	160 LF
711	FIBER OPTIC PATCH PANEL	1 UNIT
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT



BLOCK WIRING DIAGRAM



NOTE:
 ORIGINAL ELECTRICAL PLAN TITLED "ELECTRICAL PLANS, ROUTE 46 & LAUREL STREET"
 PREPARED BY NJDOT LAST REVISED 3-09-88

REVISIONS:		
NO.	DESCRIPTION	DATE

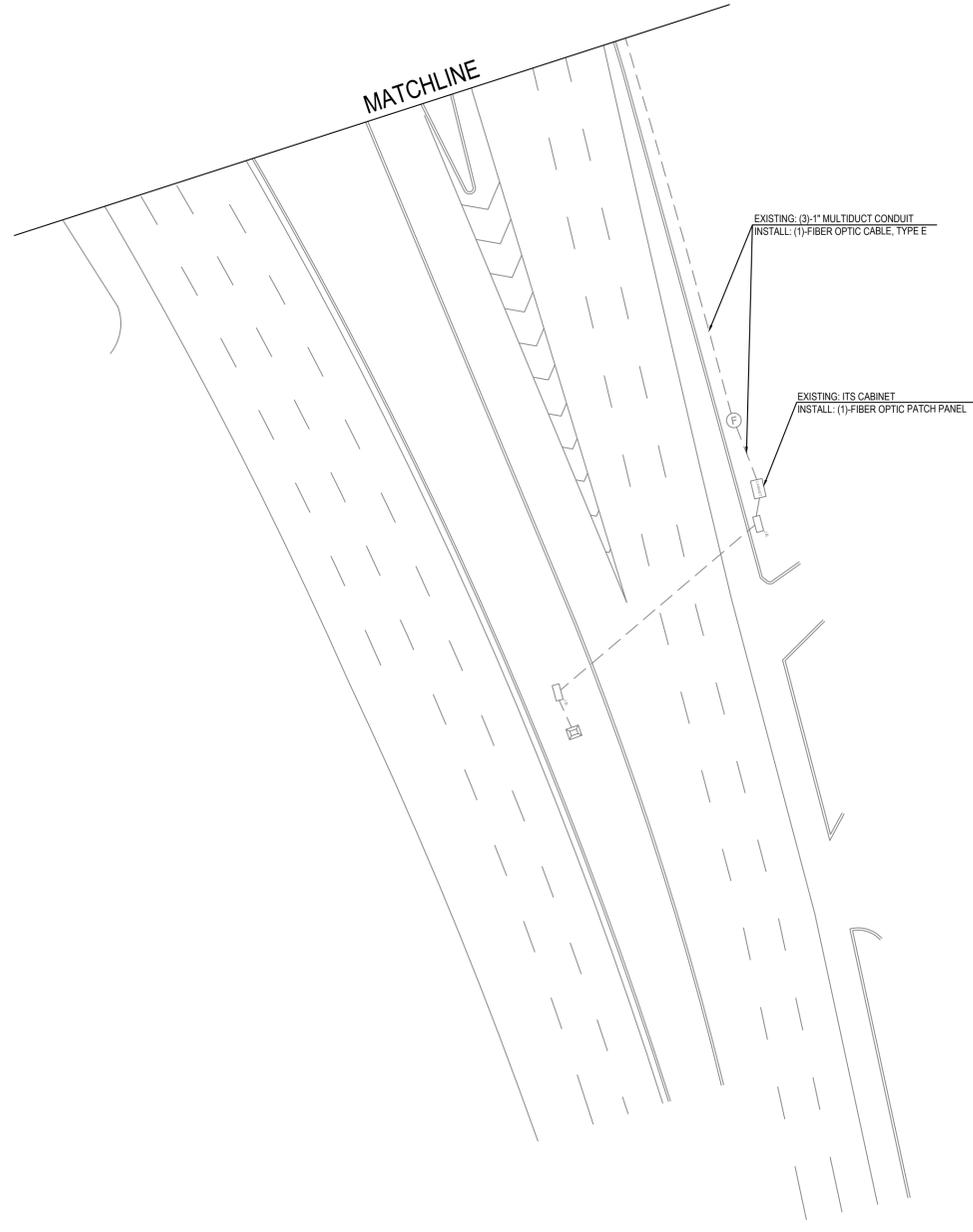
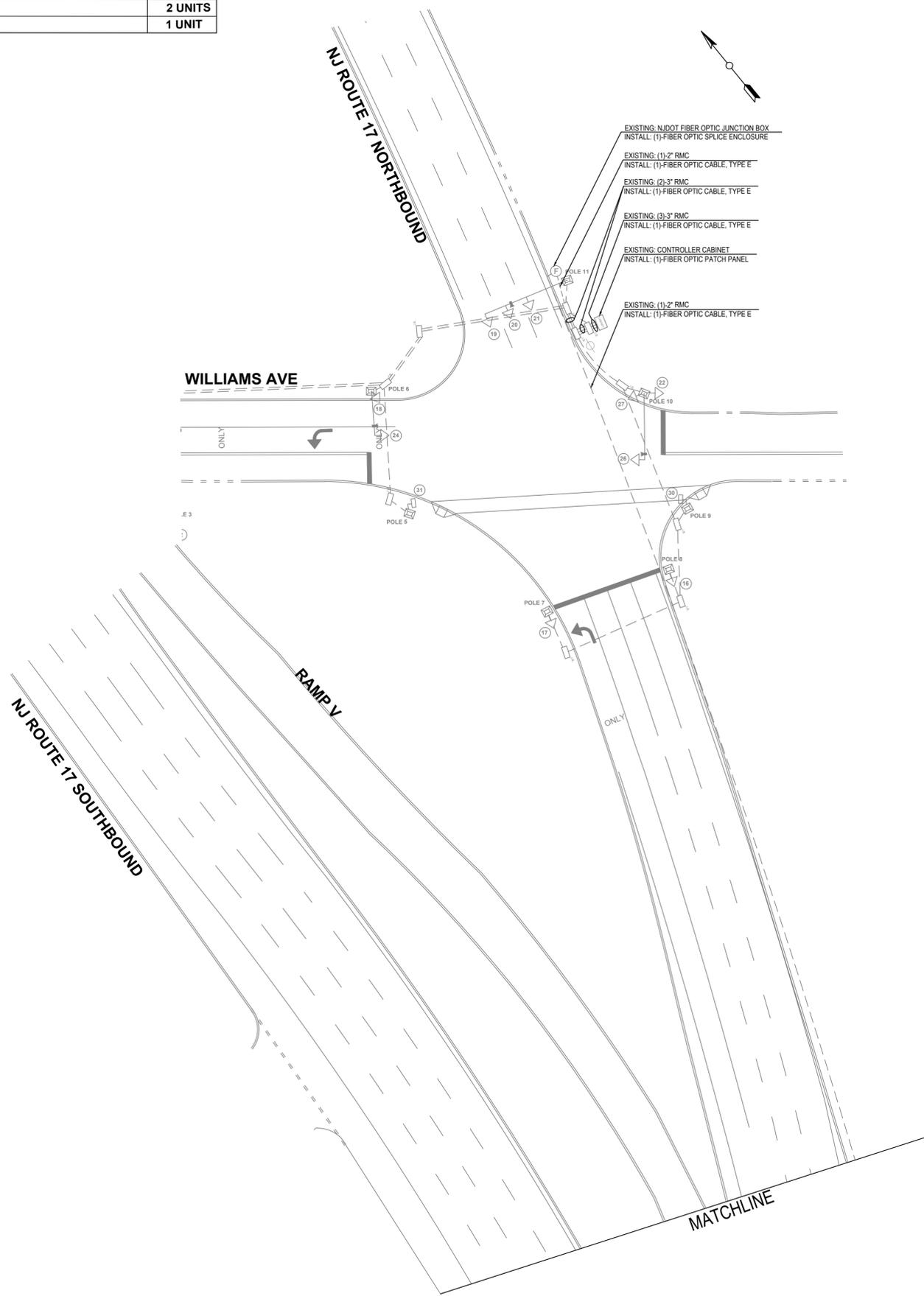
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -21- 940: ROUTE 46 & LAUREL STREET RIDGEFIELD PARK BERGEN, NJ SCALE: 1"=20' NJMC PROJECT: PHASE 5 SHEET #: 28 OF 66
--	--	--	---

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
705	FIBER OPTIC CABLE, TYPE E	870 LF
711	FIBER OPTIC PATCH PANEL	2 UNITS
712	FIBER OPTIC SPLICE ENCLOSURE	1 UNIT



NOTE:
 1. ORIGINAL ELECTRICAL PLAN TITLED "ELECTRICAL PLAN
 NJ ROUTE 17 & WILLIAMS AVE", DATED 01-08-2008, PREPARED BY HNTB
 CORPORATION.

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

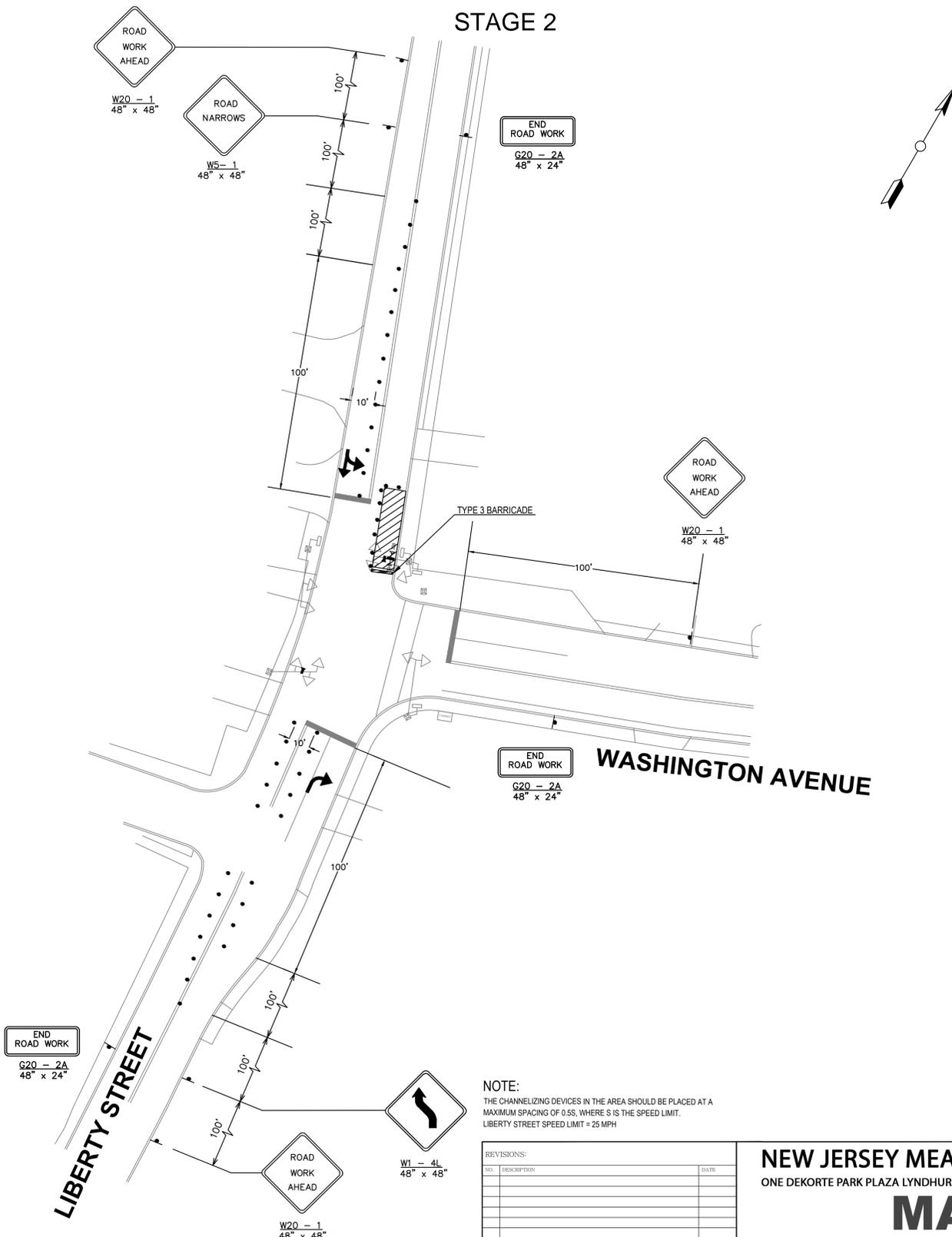
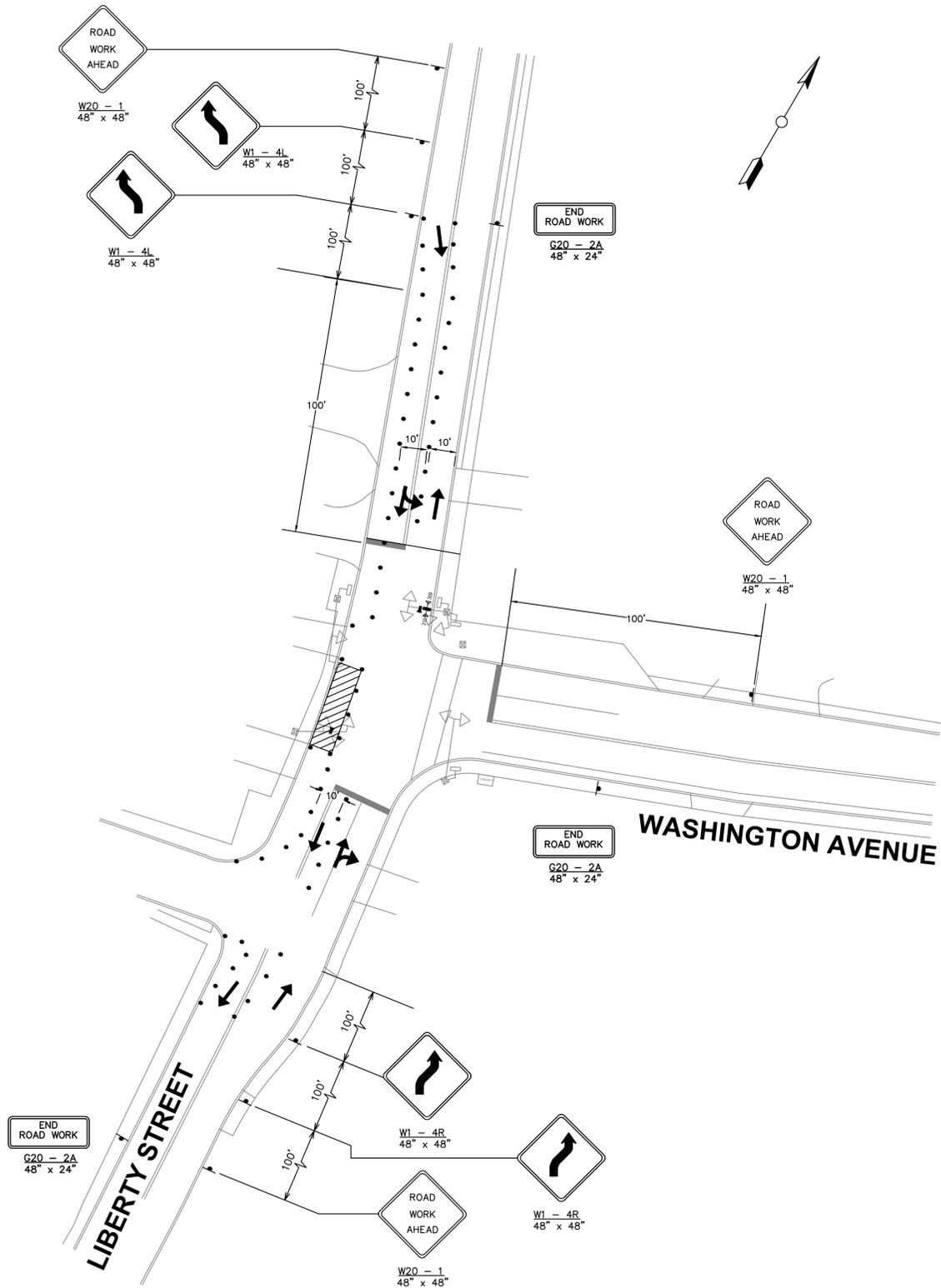
NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE46897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	ELECTRICAL PLAN -22- 926: NJ ROUTE 17 & WILLIAMS AVENUE BOROUGH OF HASBROUCK HEIGHTS BERGEN, NJ SCALE: 1"= 30' N.J.M.C. PROJECT: PHASE 5 SHEET #: 29 OF 66
--	--	--	--

STAGE 1

STAGE 2



NOTE:
THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
LIBERTY STREET SPEED LIMIT = 25 MPH

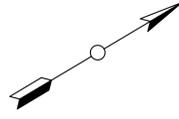
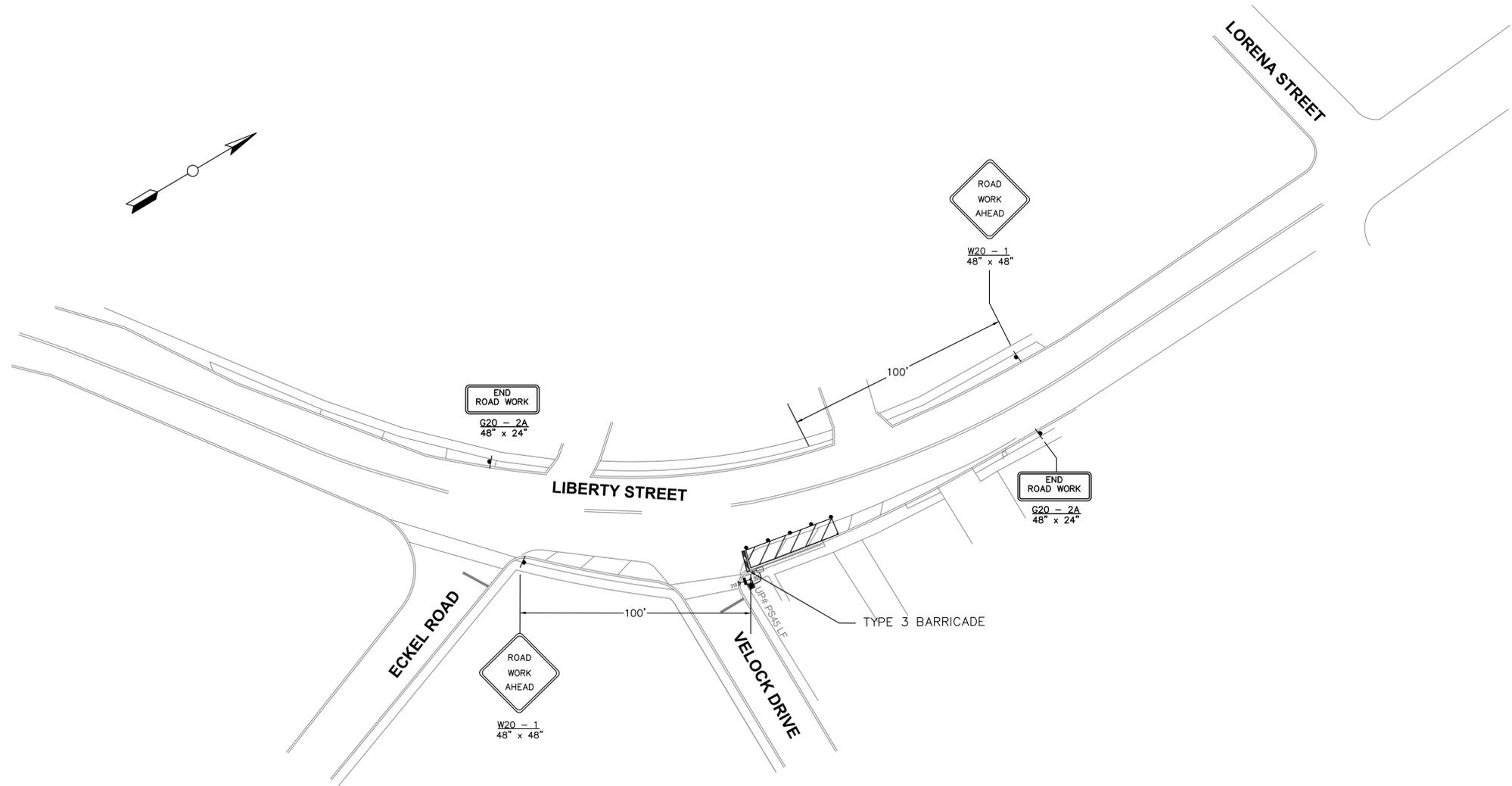
REVISIONS:	
NO.	DESCRIPTION

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE483481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -1- 308: LIBERTY STREET & WASHINGTON AVENUE LITTLE FERRY BERGEN, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 5 SHEET #: 30 OF 66
--	---	--	---



NOTE:
 THE CHANNELING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 60'. WHERE'S IS THE SPEED LIMIT
 LIBERTY STREET SPEED LIMIT = 30 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

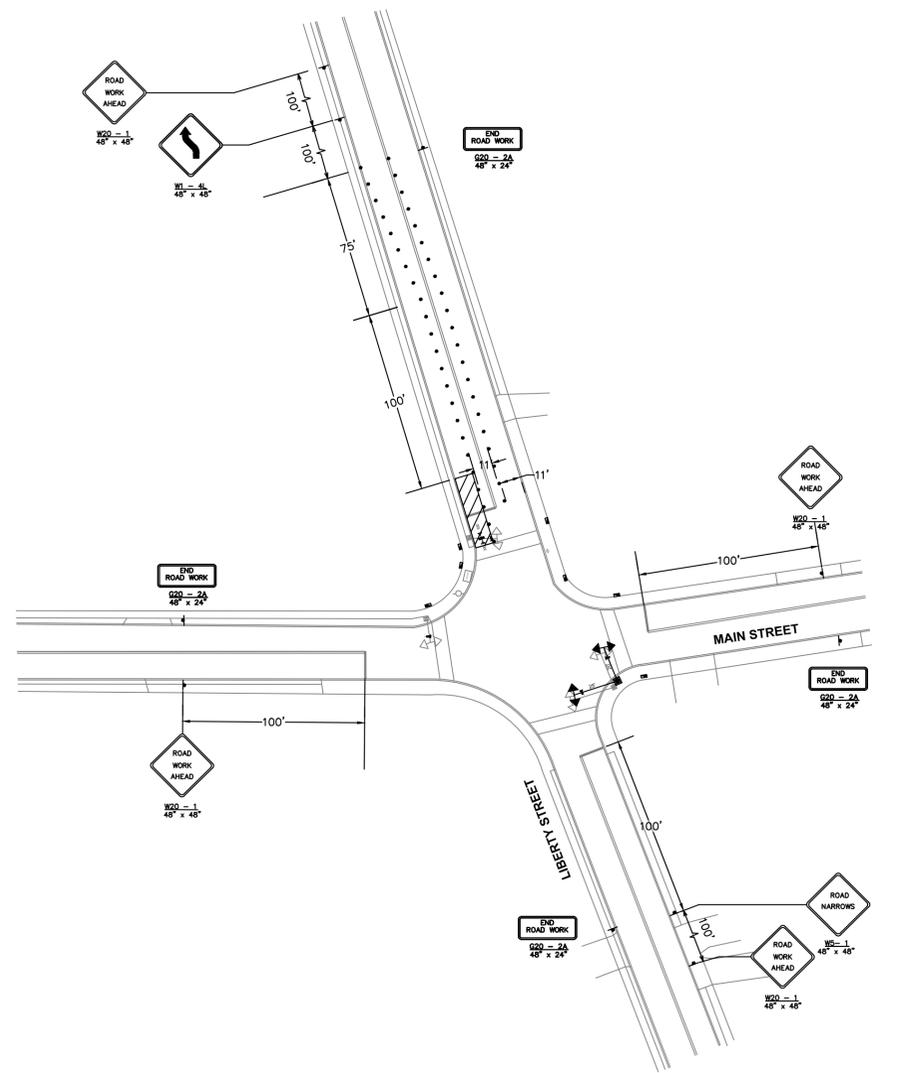
DRAWN BY: DN	APPROVED BY: HY
CHECKED BY: LA	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

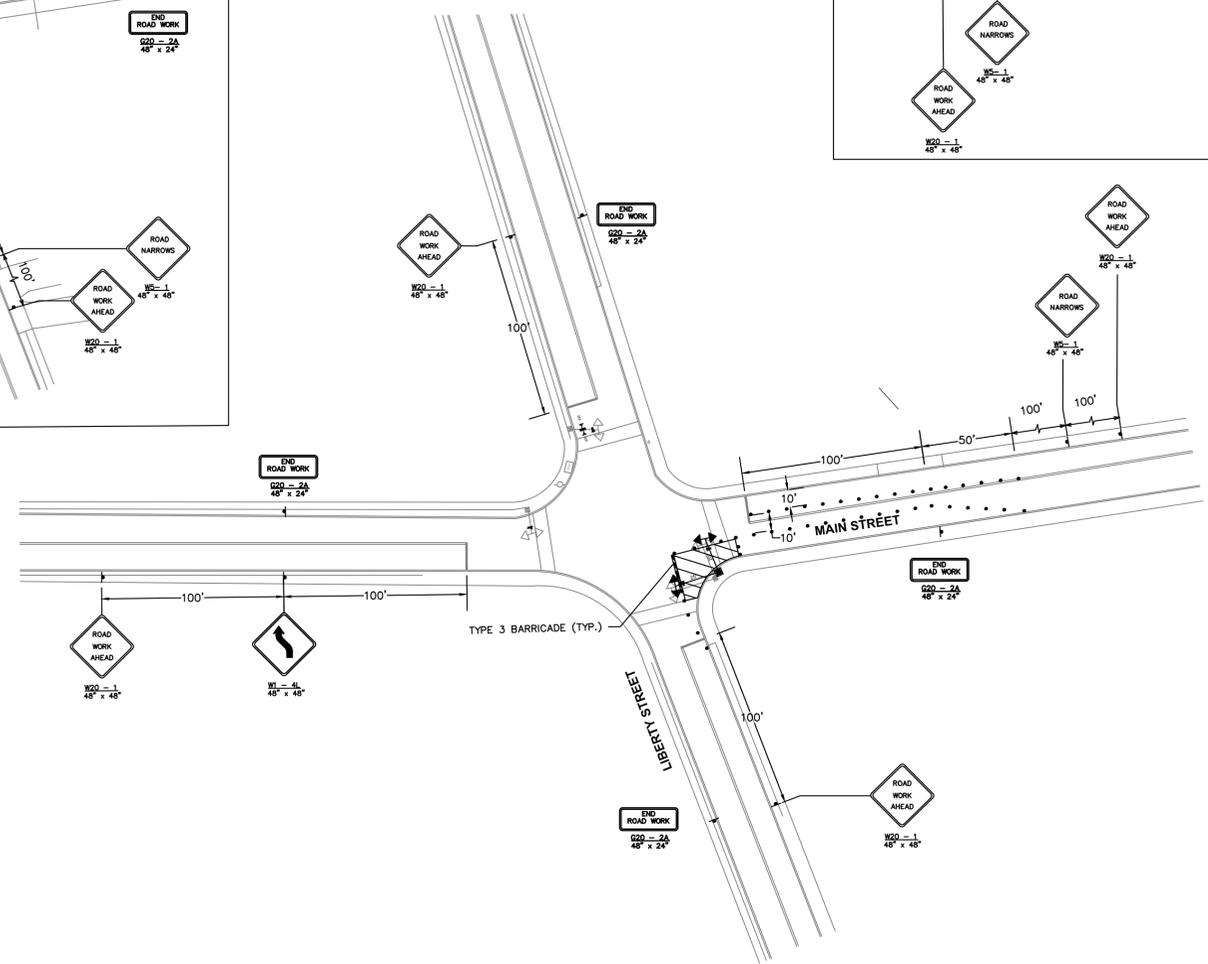
MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -1A- 308A: LIBERTY STREET ANTENNA LOCATIONS LITTLE FERRY BERGEN, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 2 SHEET #: 31 OF 66
--	--	--	--

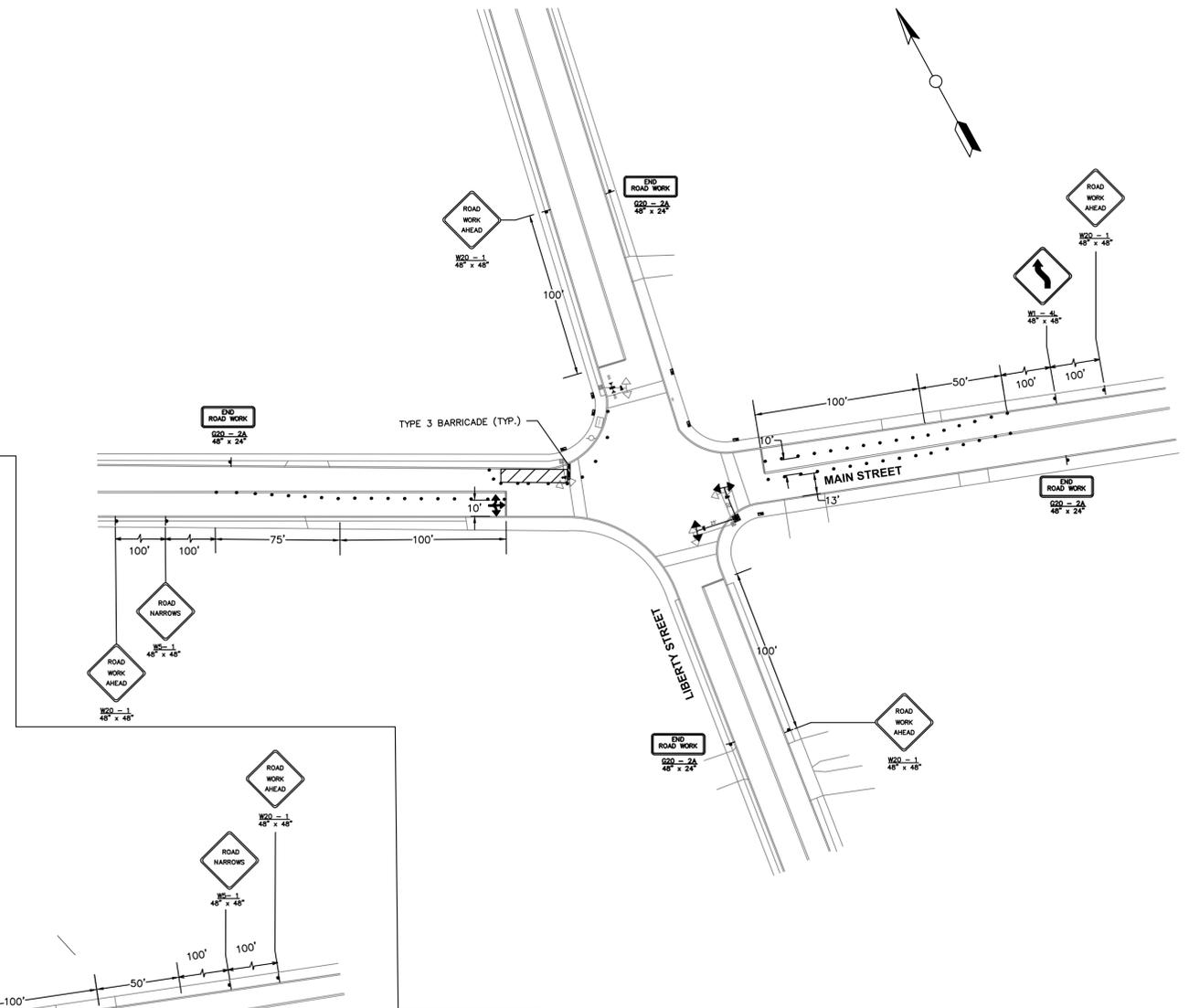
STAGE 1



STAGE 2



STAGE 3



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 MAIN STREET SPEED LIMIT = 30 MPH
 LIBERTY STREET SPEED LIMIT = 30 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

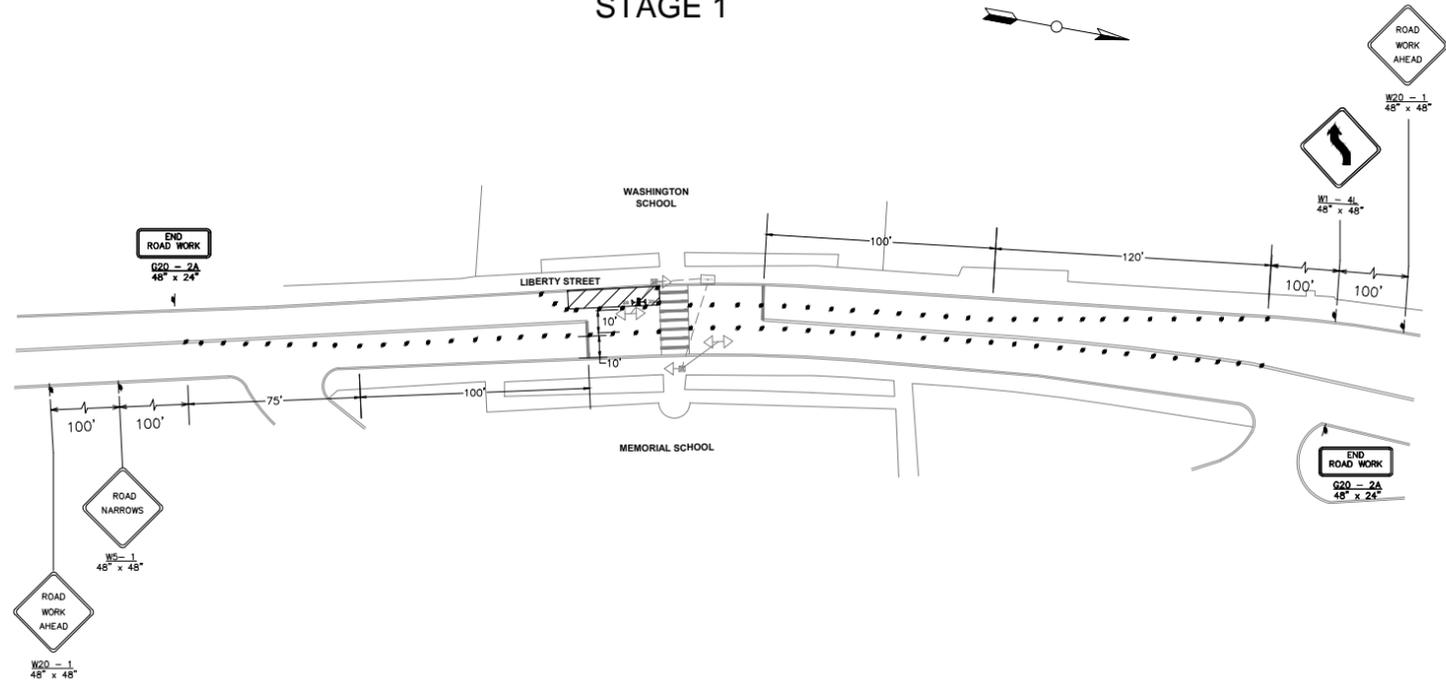
DRAWN BY: DN	APPROVED BY: HY
CHECKED BY: LA	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

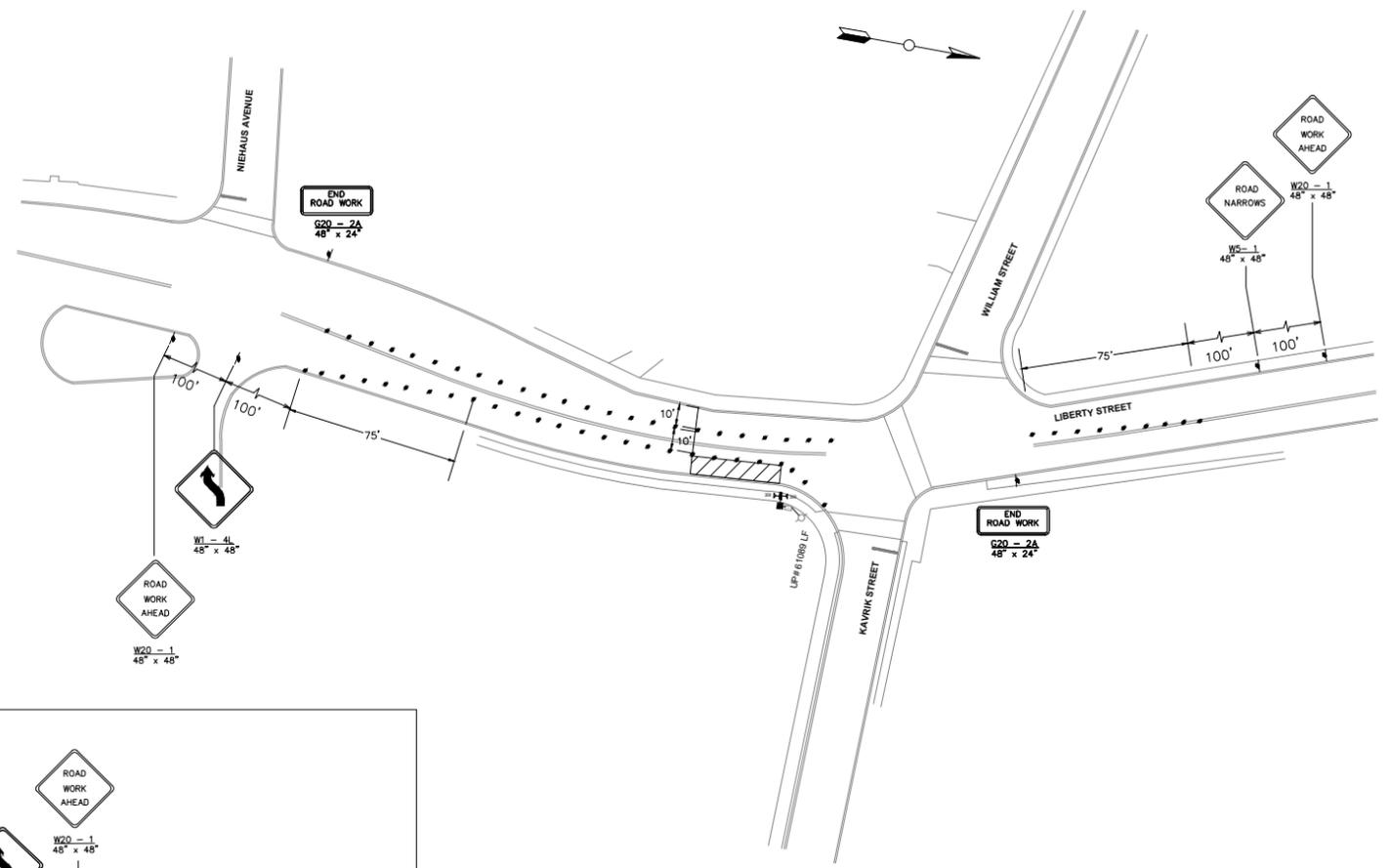
MASTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE488481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -2- 309: LIBERTY STREET AND MAIN STREET LITTLE FERRY BERGEN, NJ SCALE: 1"=50' N/JMC PROJECT: PHASE 5 SHEET #: 32 OF 66
--	---	--	---

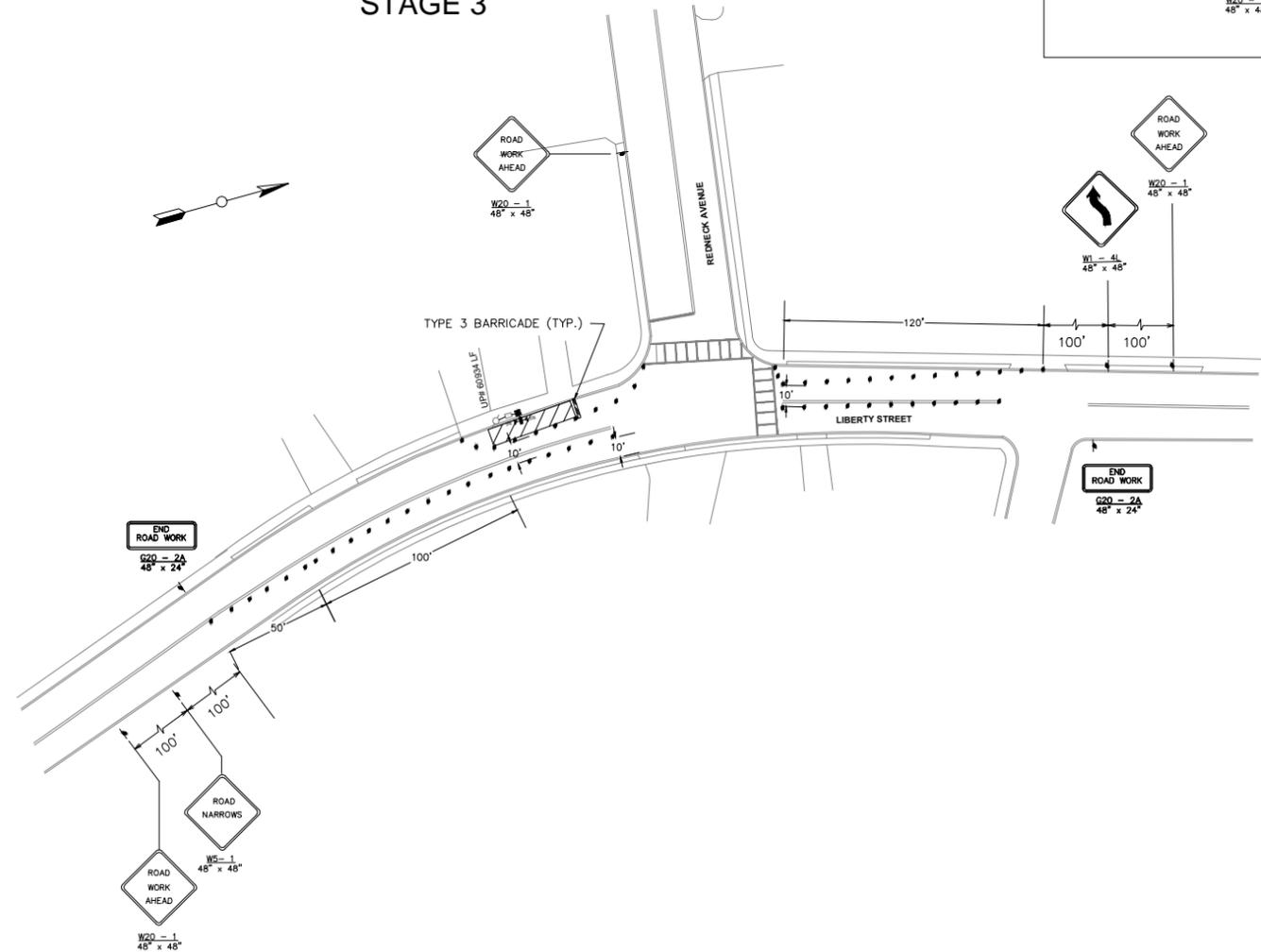
STAGE 1



STAGE 2



STAGE 3



NOTE:
THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
LIBERTY STREET SPEED LIMIT = 30 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



DAVID LIEBGOLD
David Liebgold
PROFESSIONAL ENGINEER N.J. LIC. GE45897

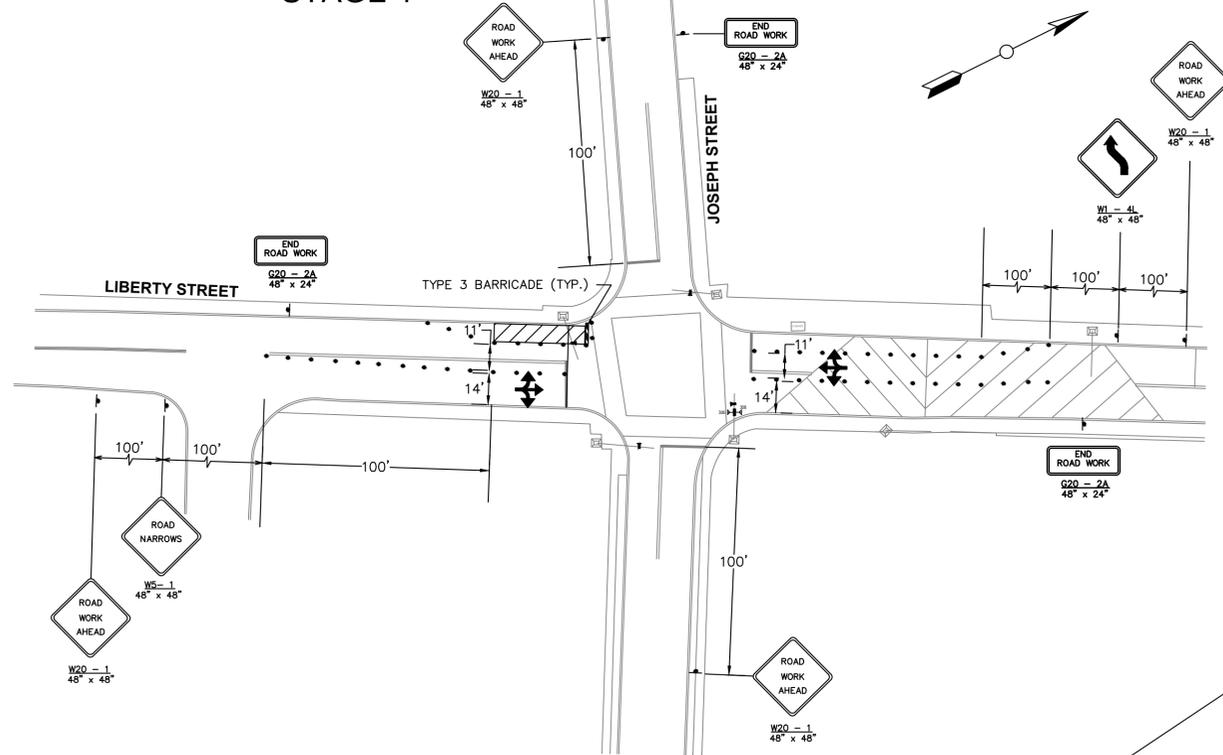
HONG YUAN
Hong Yuan
PROFESSIONAL ENGINEER N.J. LIC. GE48461

LEOMAR ALMANZAR
Leomar Almanzar
PROFESSIONAL ENGINEER N.J. LIC. GE48348

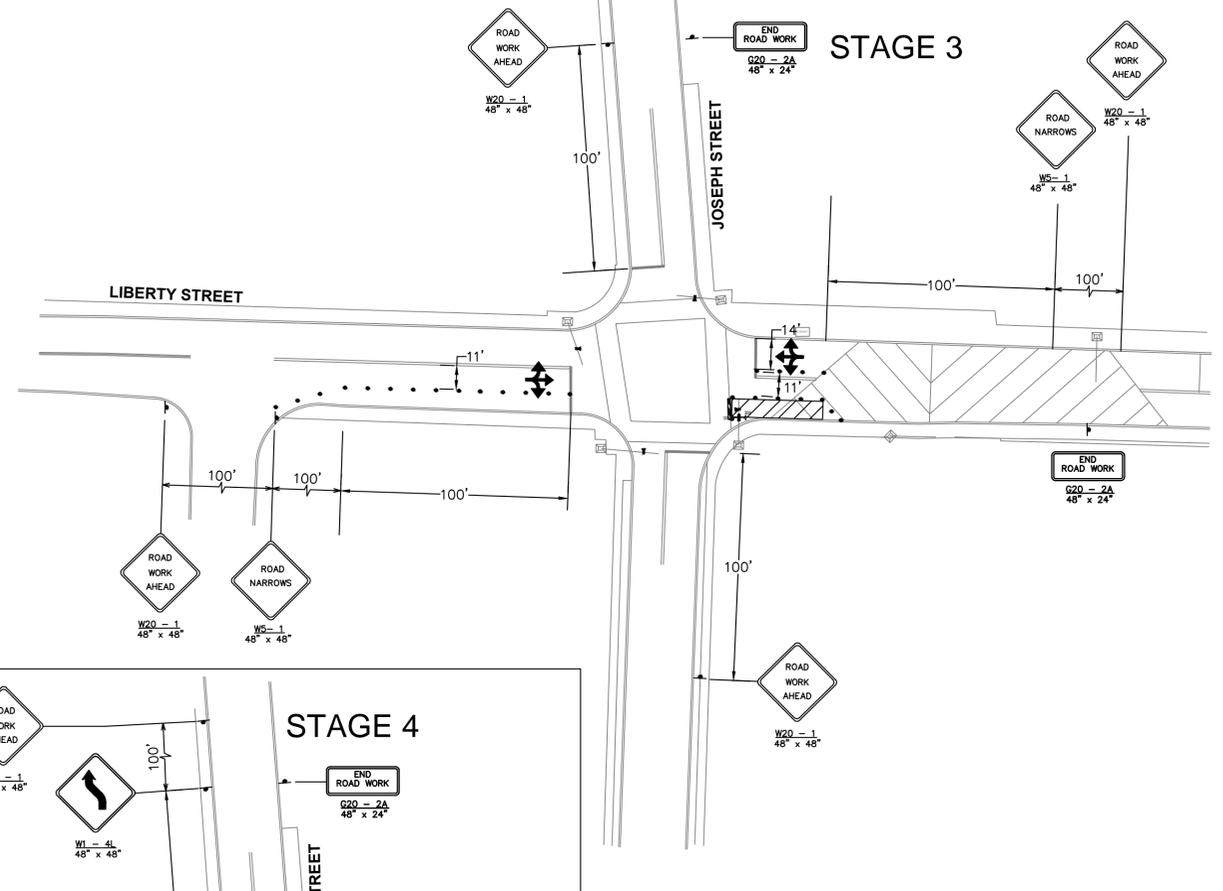
TRAFFIC CONTROL PLAN -2A-
309A: LIBERTY STREET ANTENNA LOCATIONS
LITTLE FERRY BERGEN, NJ
SCALE: 1"=40'
NIMC PROJECT: PHASE 5
SHEET #: 33 OF 66

DRAWN BY: DN APPROVED BY: DL
CHECKED BY: HY DATE: 8/01/14

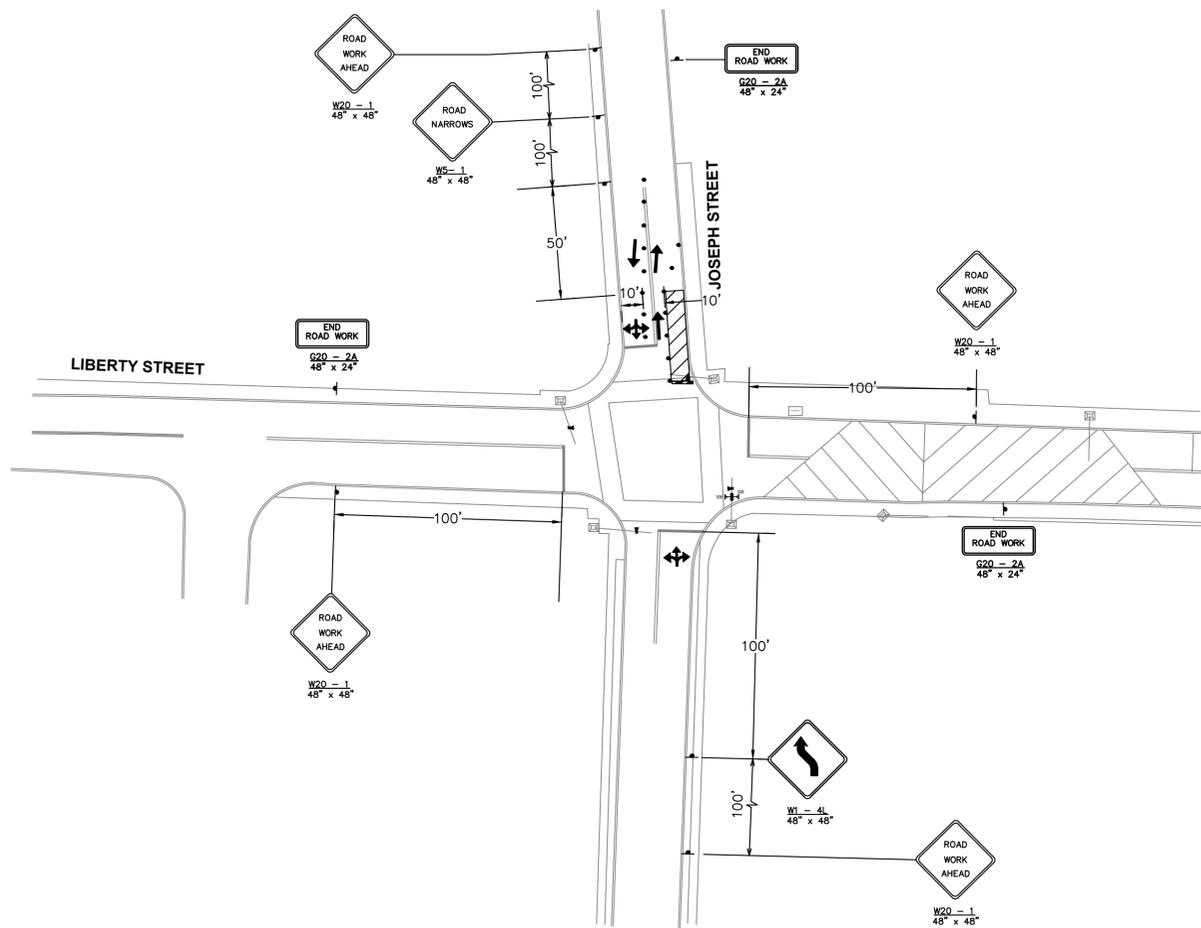
STAGE 1



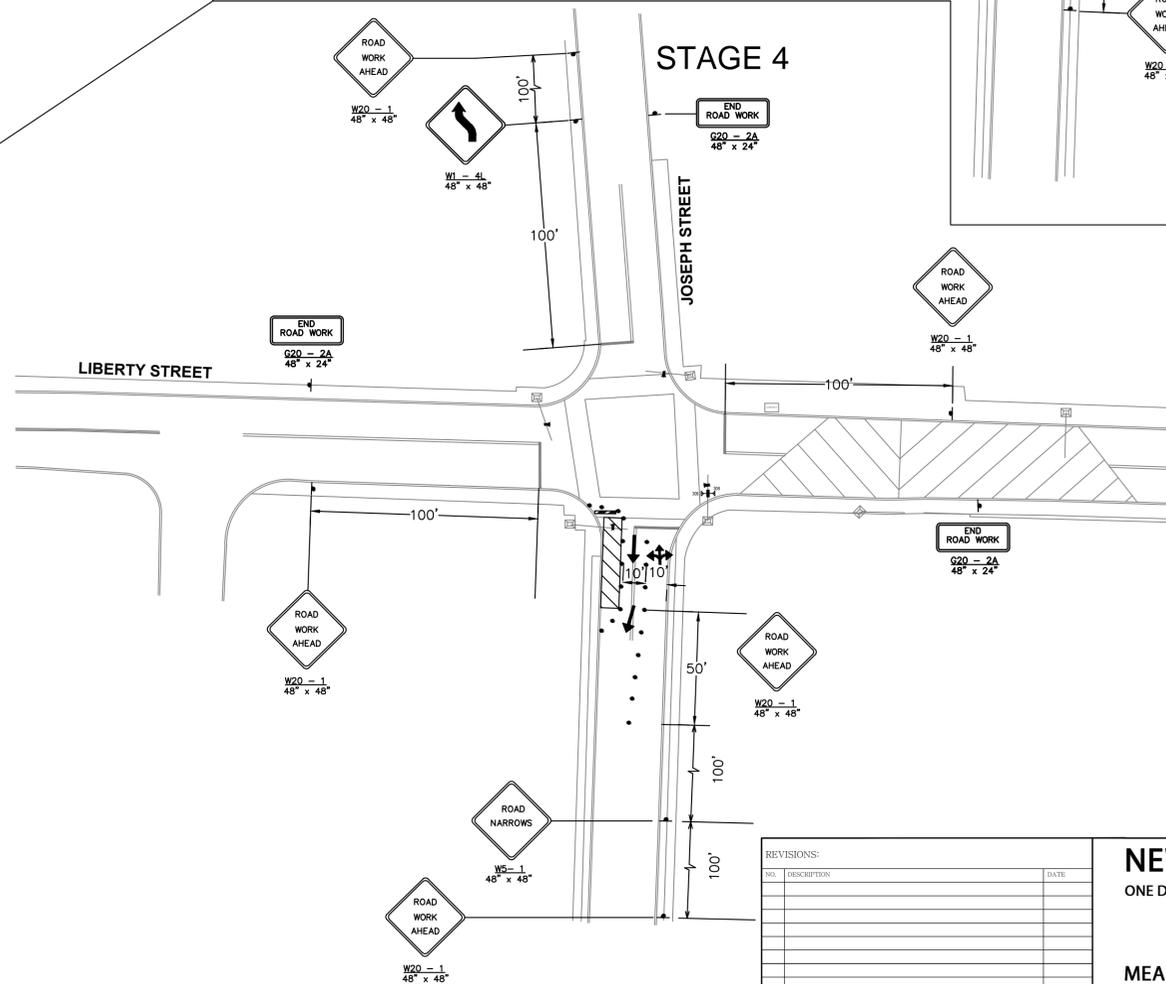
STAGE 3



STAGE 2



STAGE 4



NOTE:
THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
MOONACHIE ROAD SPEED LIMIT = 35 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN
CHECKED BY: HY
APPROVED BY: DL
DATE: 8/01/14

DAVID LIEBGOLD
David Liebgold
PROFESSIONAL ENGINEER N.J. LIC. GE45897

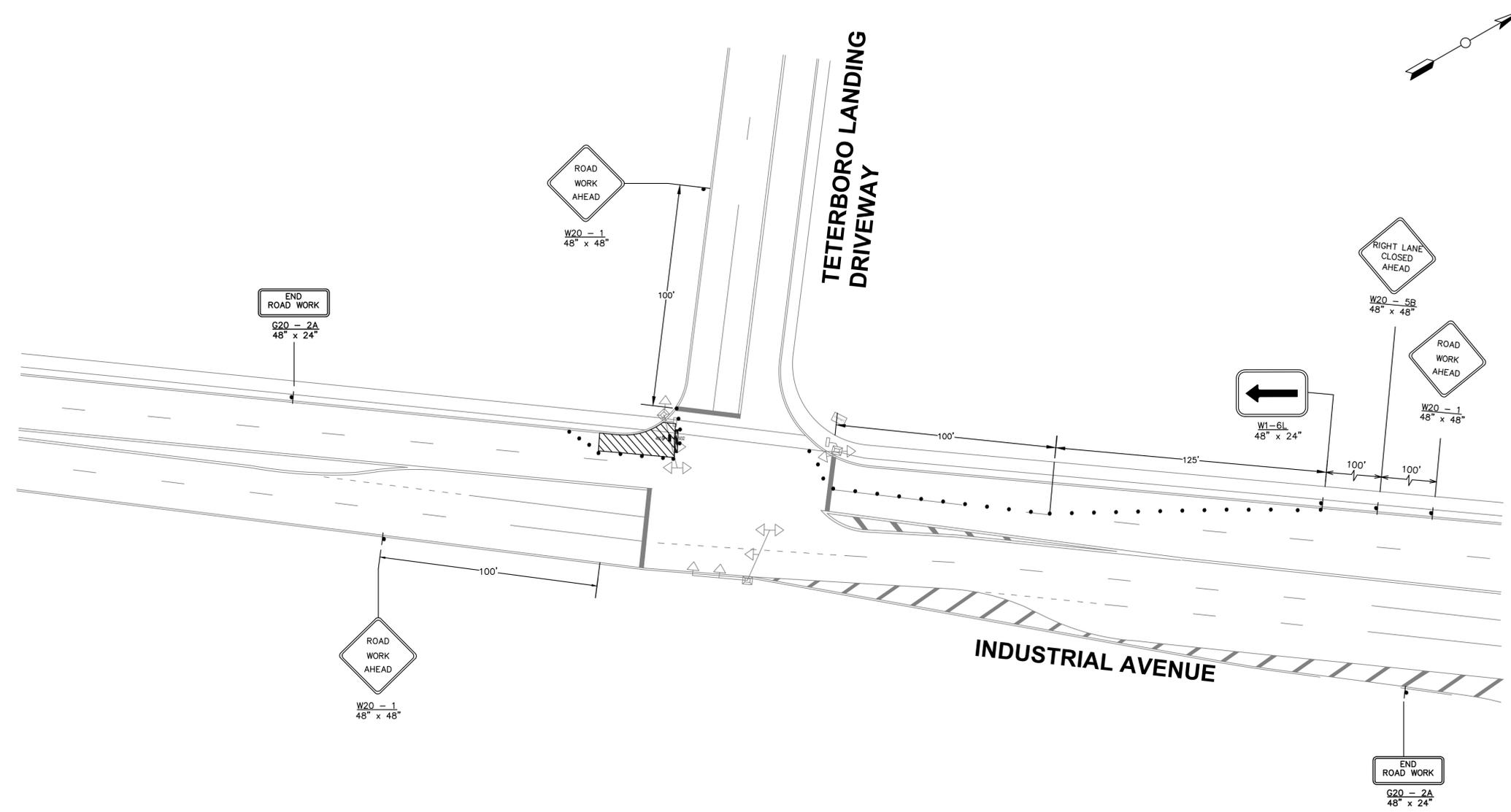
HONG YUAN
Hong Yuan
PROFESSIONAL ENGINEER N.J. LIC. GE48348

LEOMAR ALMANZAR
Leomar Almanzar
PROFESSIONAL ENGINEER N.J. LIC. GE48348

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434
MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



TRAFFIC CONTROL PLAN -3-
310: MOONACHIE ROAD AND JOSEPH STREET
MOONACHIE BERGEN, NJ
SCALE: 1"=40'
N/JMC PROJECT: PHASE 5
SHEET #: 34 OF 66



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 INDUSTRIAL AVENUE SPEED LIMIT = 25 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

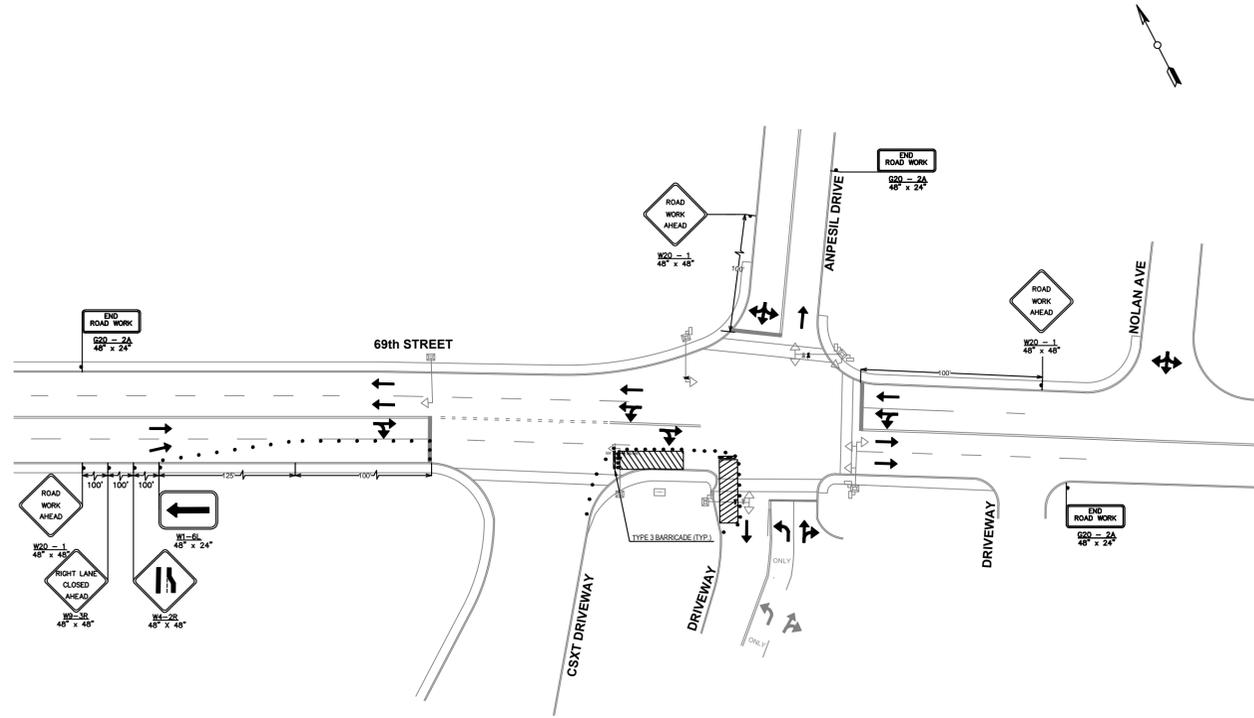
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

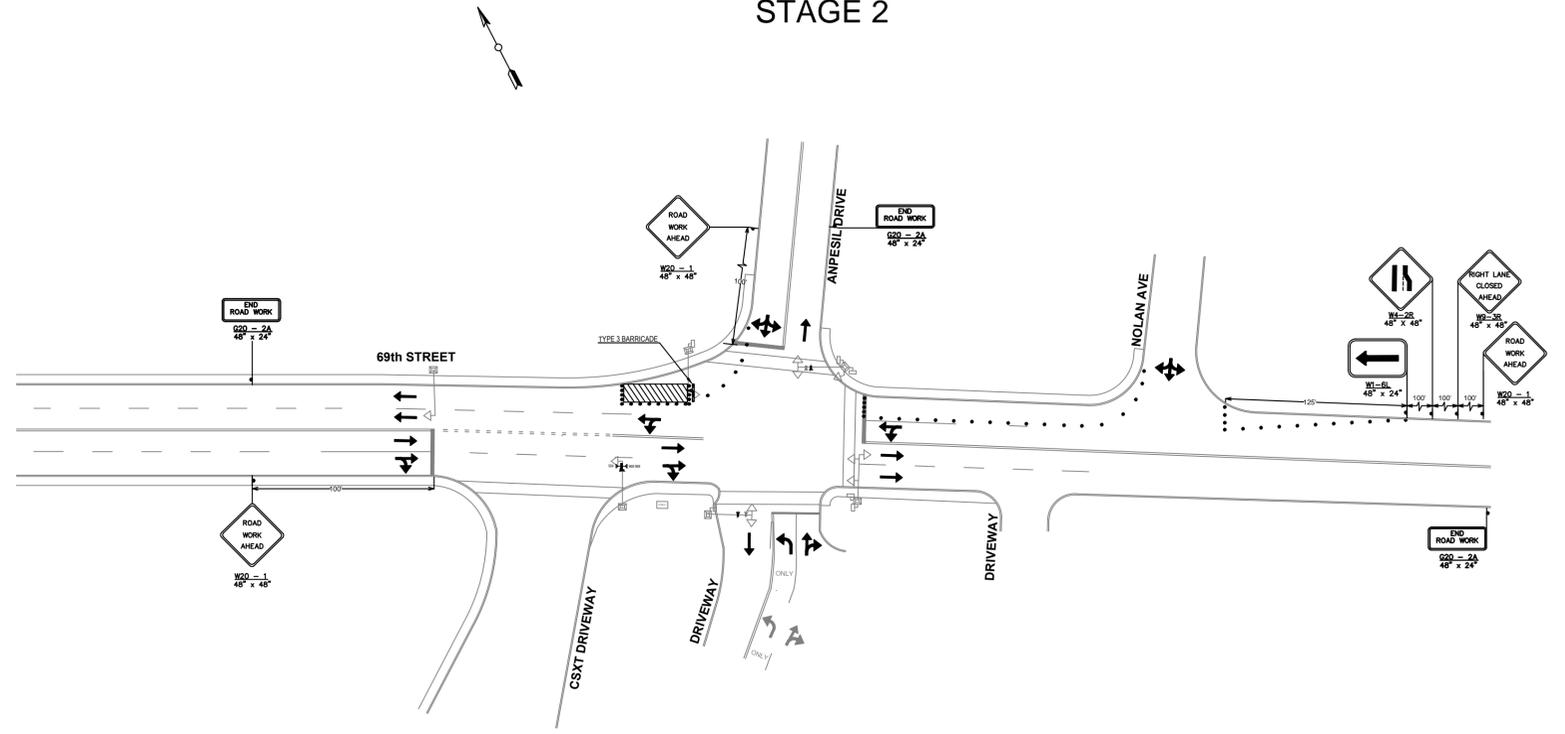
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE46897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -4- 401: INDUSTRIAL AVENUE & TETERBORO LANDING DRIVE TETERBORO BERGEN, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 5 SHEET #: 36 OF 66
---	--	--	---

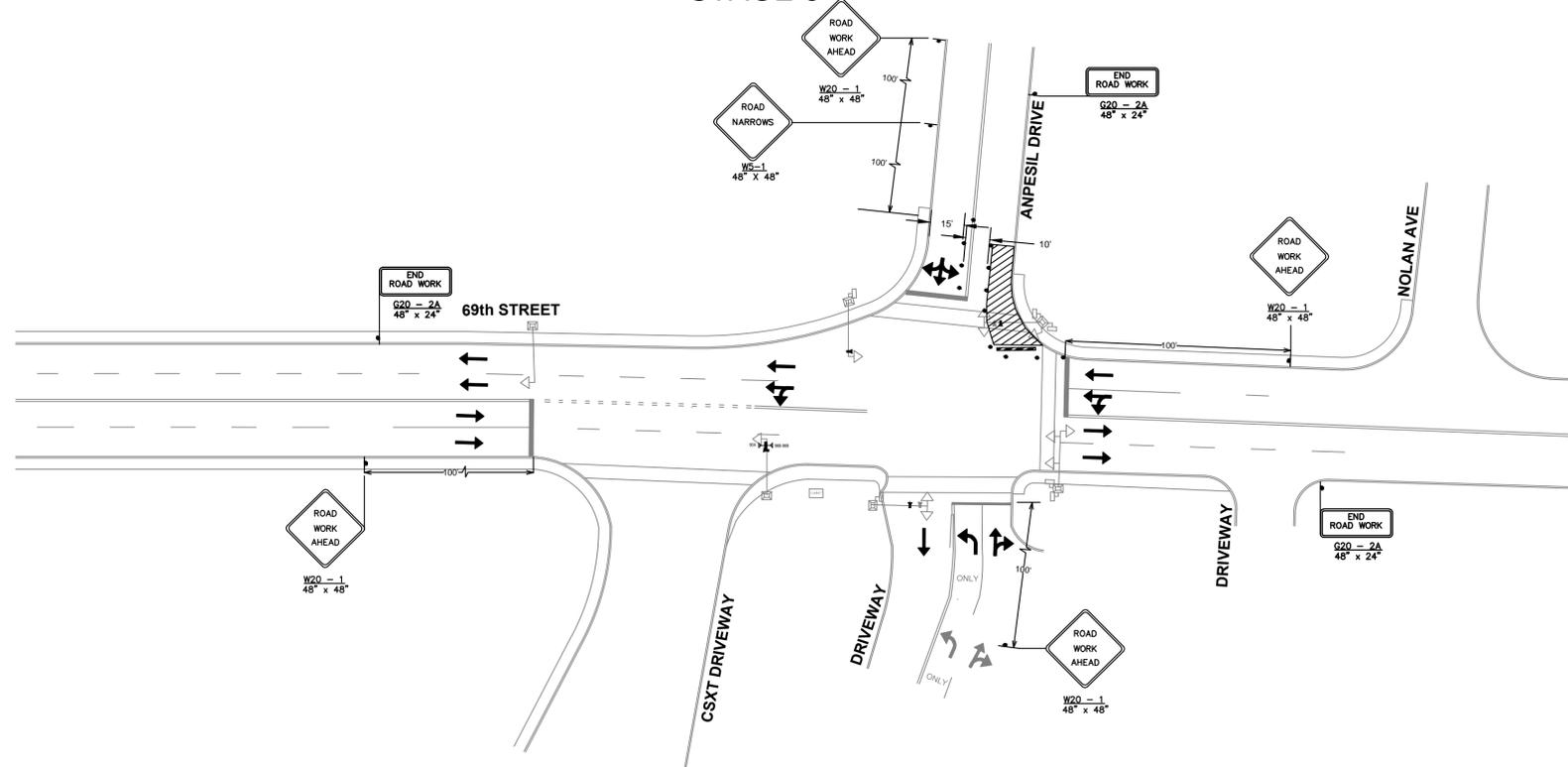
STAGE 1



STAGE 2



STAGE 3



NOTE:
THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE "S" IS THE SPEED LIMIT.

69TH STREET SPEED LIMIT = 25 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



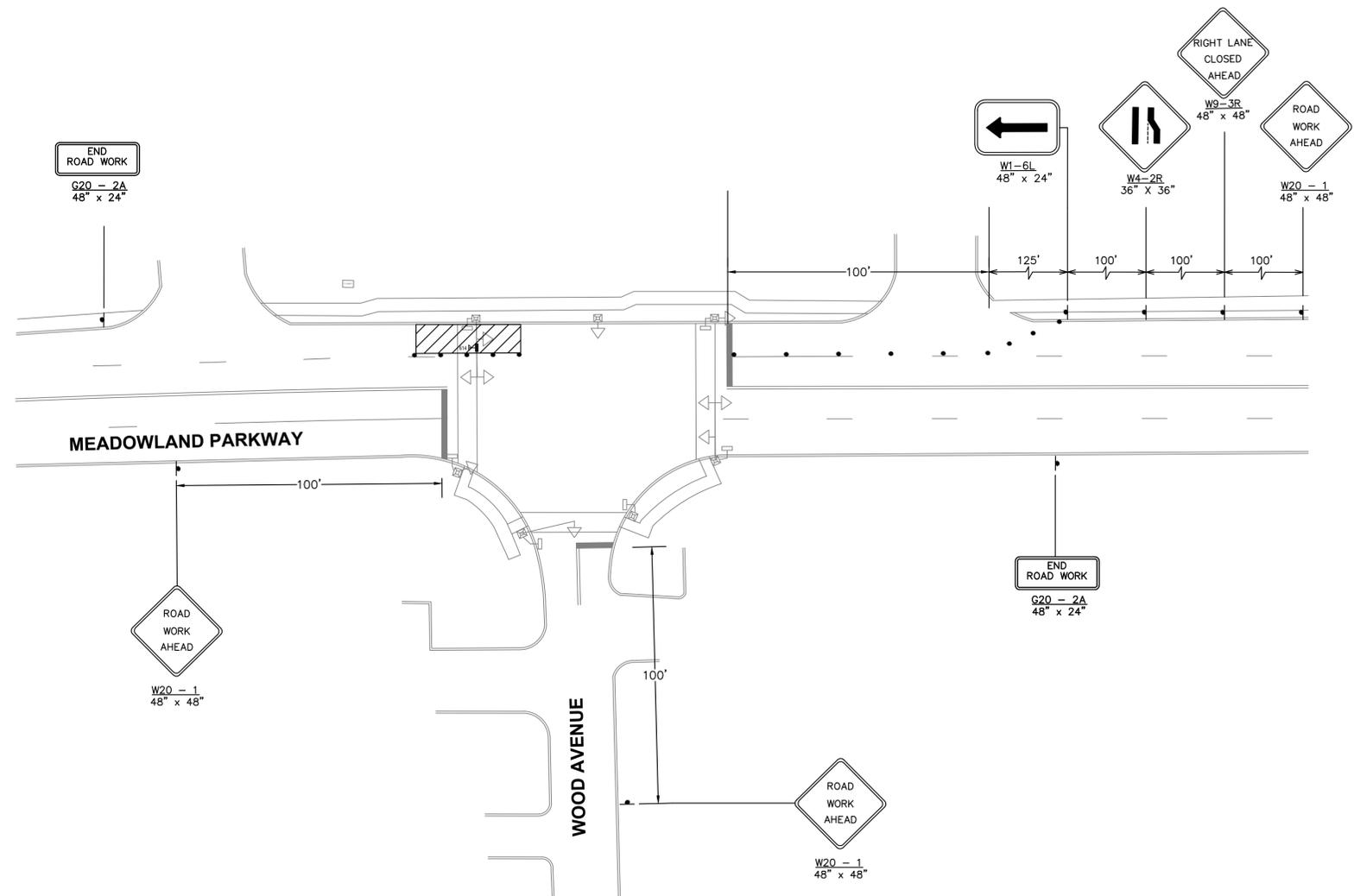
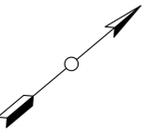
DAVID LIEBGOLD
David Liebgold
PROFESSIONAL ENGINEER N.J. LIC. GE48897

HONG YUAN
Hong Yuan
PROFESSIONAL ENGINEER N.J. LIC. GE48481

LEOMAR ALMANZAR
Leomar Almanzar
PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -6-
505: 69TH STREET & ANPESIL DRIVE
TOWNSHIP OF NORTH BERGEN HUDSON, NJ

SCALE: 1"= 40'
N/JMC PROJECT: PHASE 5
SHEET #: 38 OF 66



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 MEADOWLAND PARKWAY SPEED LIMIT = 25 MPH
 WOOD AVENUE SPEED LIMIT = 25 MPH

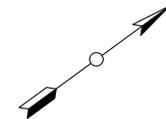
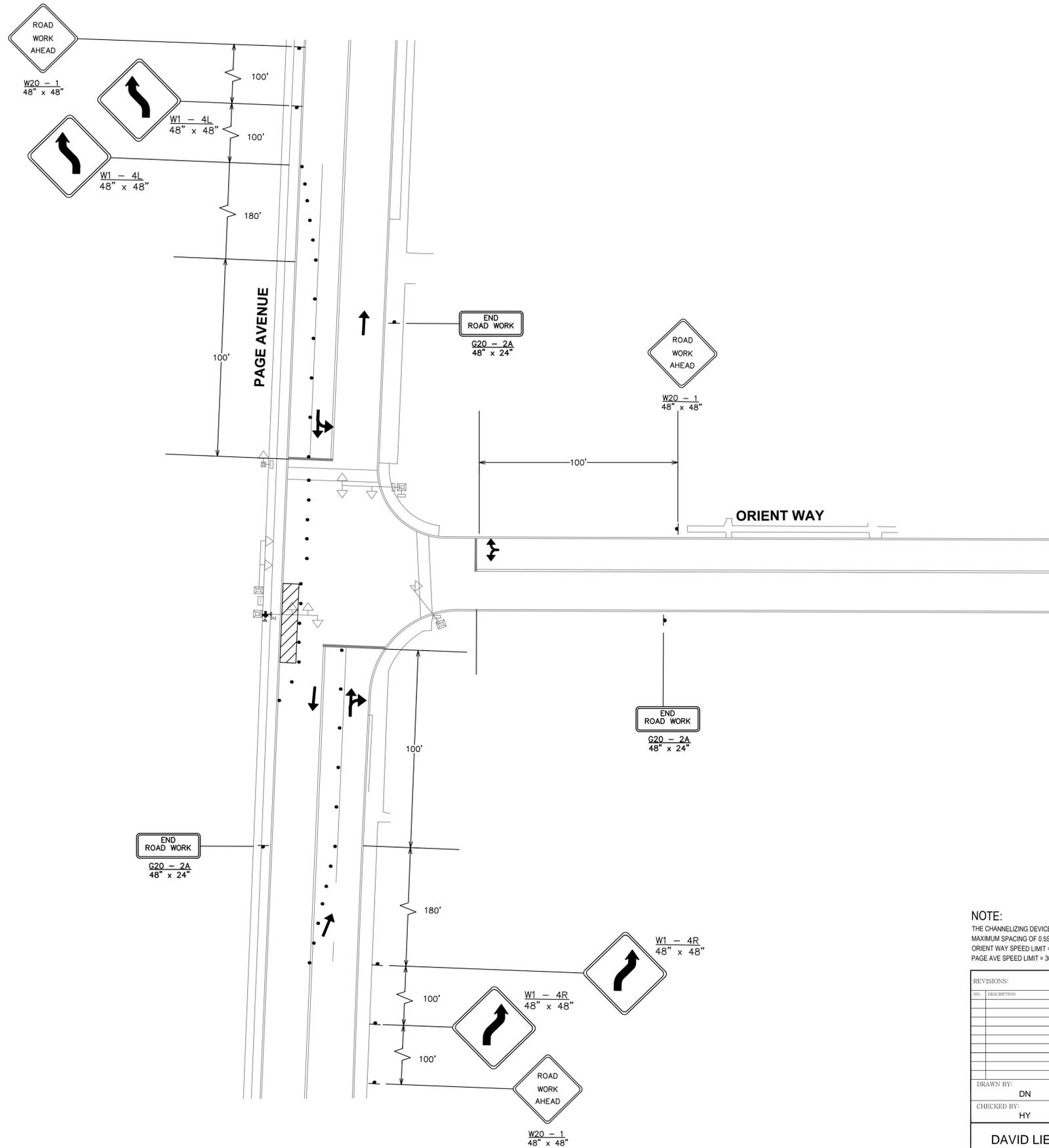
REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -7- 615: MEADOWLAND PARKWAY AND WOOD AVENUE SECAUCUS HUDSON, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 5 SHEET #: 39 OF 66
--	---	---	---



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ORIENT WAY SPEED LIMIT = 30 MPH
 PAGE AVE SPEED LIMIT = 30 MPH

REVISIONS:	
NO.	DESCRIPTION

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434
MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



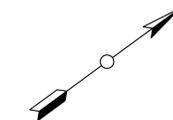
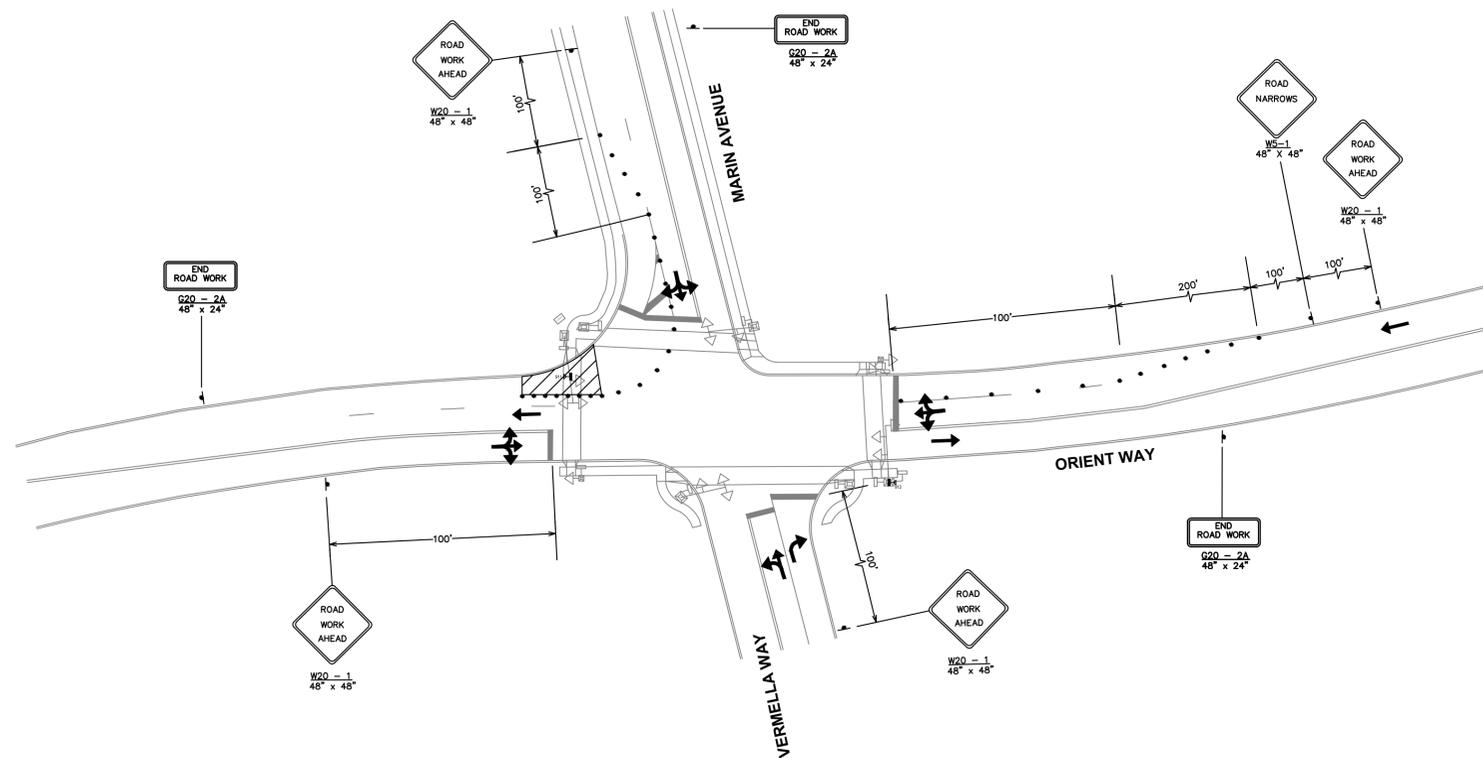
DAVID LIEBGOLD
David Liebgold
 PROFESSIONAL ENGINEER N.J. LIC. GE48897

HONG YUAN
Hong Yuan
 PROFESSIONAL ENGINEER N.J. LIC. GE48481

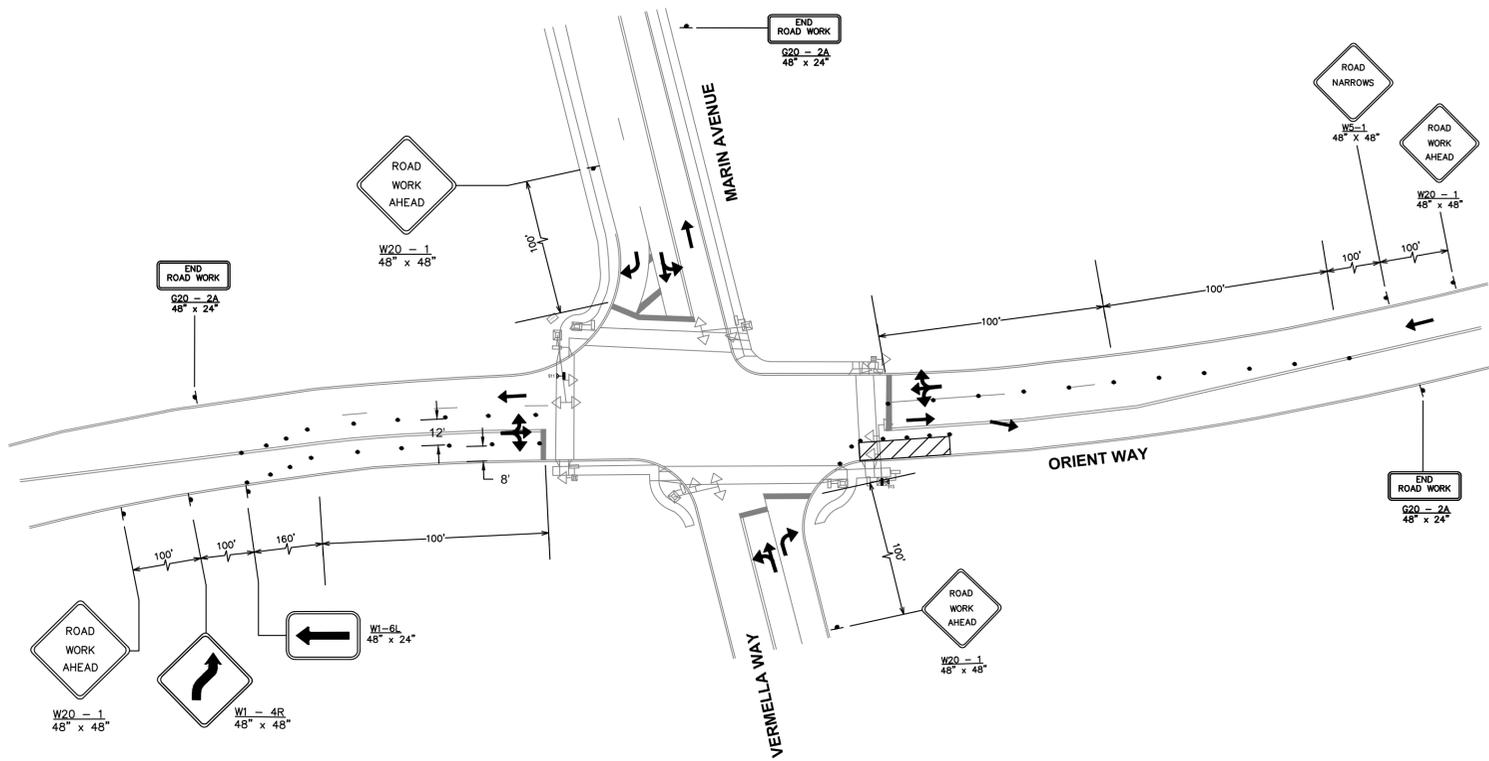
LEOMAR ALMANZAR
Leomar Almanzar
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -8-
 911: ORIENT WAY AND PAGE AVE.
 LYNDHURST BERGEN, NJ
 SCALE: 1"=30'
 N/JMC PROJECT: PHASE 2
 SHEET #: 40 OF 66

STAGE 1



STAGE 2



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ORIENT WAY SPEED LIMIT = 35 MPH
 MARIN AVENUE SPEED LIMIT = 25 MPH

REVISIONS:	
NO.	DESCRIPTION

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

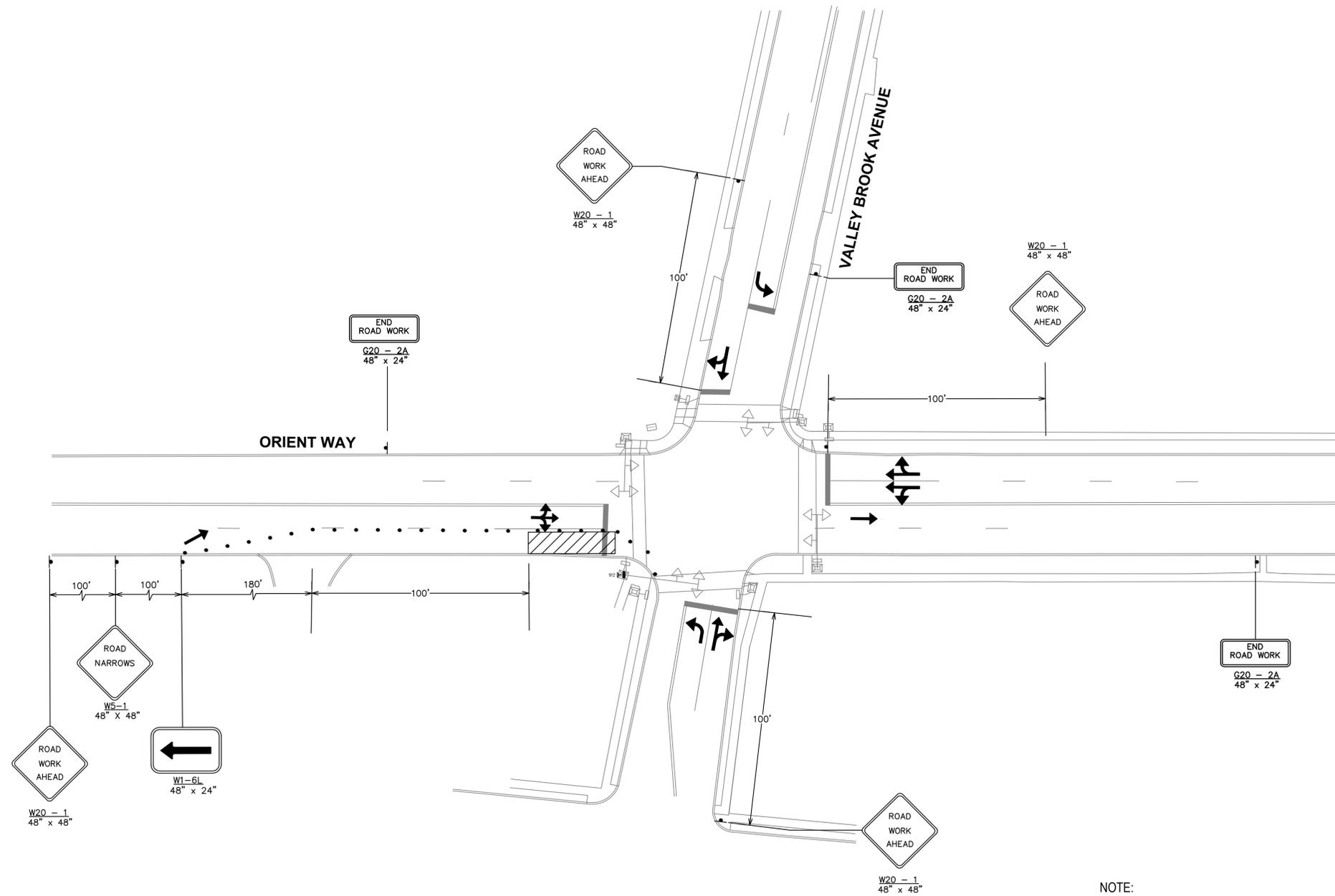
DAVID LIEBGOLD
David Liebgold
 PROFESSIONAL ENGINEER N.J. LIC. GE46897

HONG YUAN
Hong Yuan
 PROFESSIONAL ENGINEER N.J. LIC. GE48481

LEOMAR ALMANZAR
Leomar Almanzar
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -9-
 912: ORIENT WAY AND MARIN AVE.
 LYNDHURST BERGEN, NJ

SCALE: 1"=40'	NJMC PROJECT: PHASE 5	SHEET #: 41 OF 66
------------------	--------------------------	----------------------



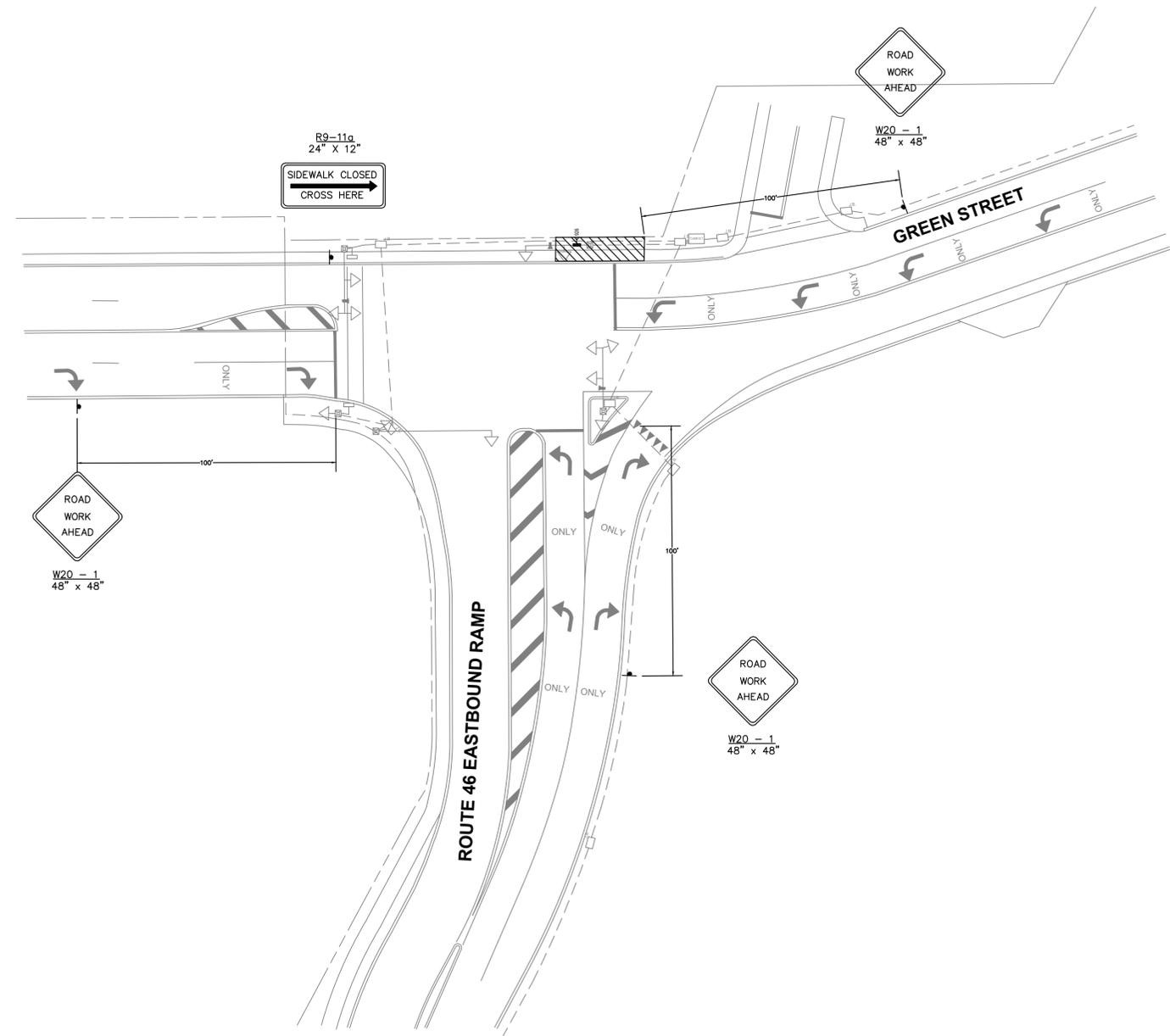
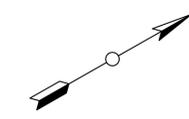
REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -10- 913: ORIENT WAY AND VALLEY BROOK AVE. LYNDHURST BERGEN, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 5 SHEET #: 42 OF 66
--	---	---	---



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 GREEN STREET SPEED LIMIT = 25 MPH

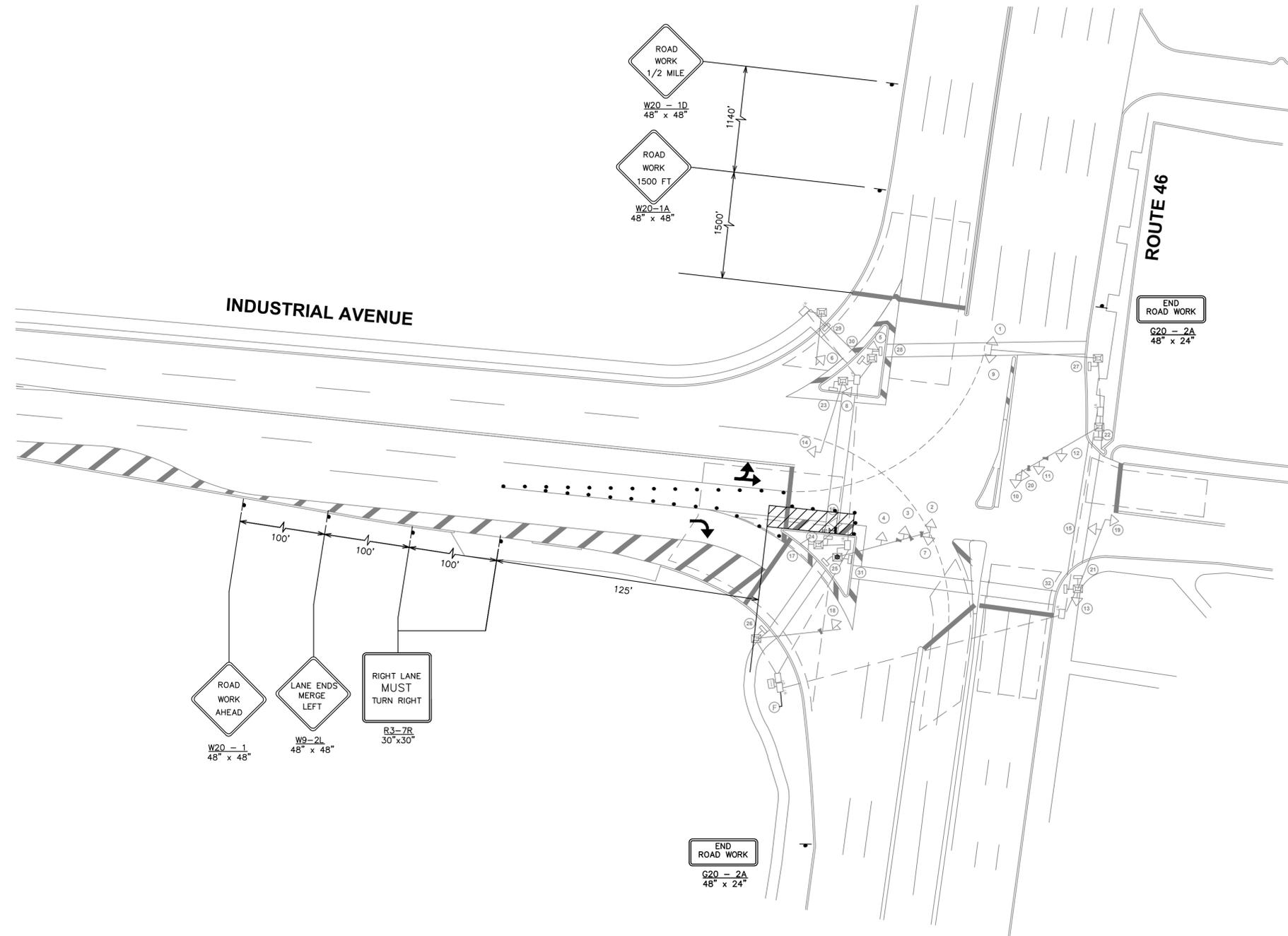
REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -12- 931: ROUTE 46 EB RAMPS & GREEN STREET TETERBORO BERGEN, NJ SCALE: 1"=30' N/JMC PROJECT: PHASE 5 SHEET #: 43 OF 66
--	--	--	---



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 50 MPH
 INDUSTRIAL AVENUE SPEED LIMIT = 25 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

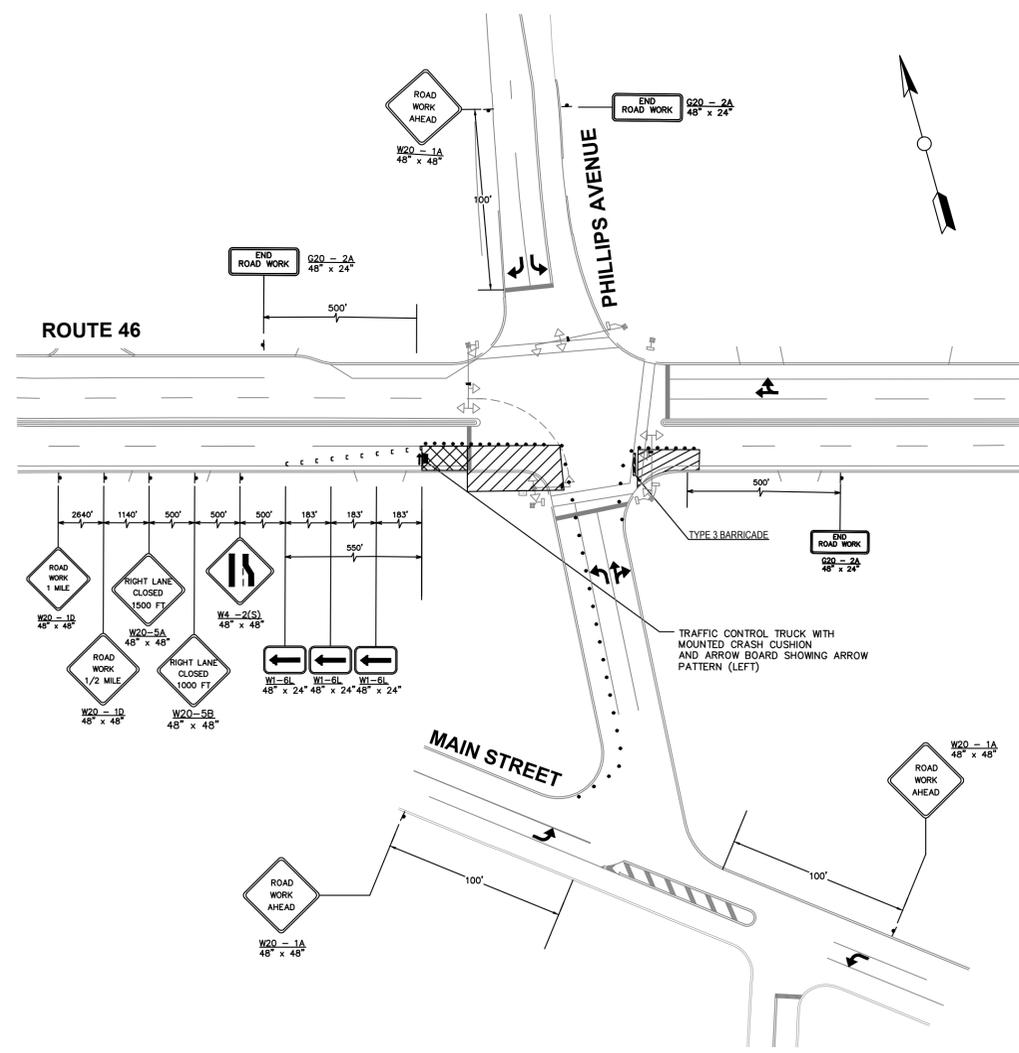
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434
MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

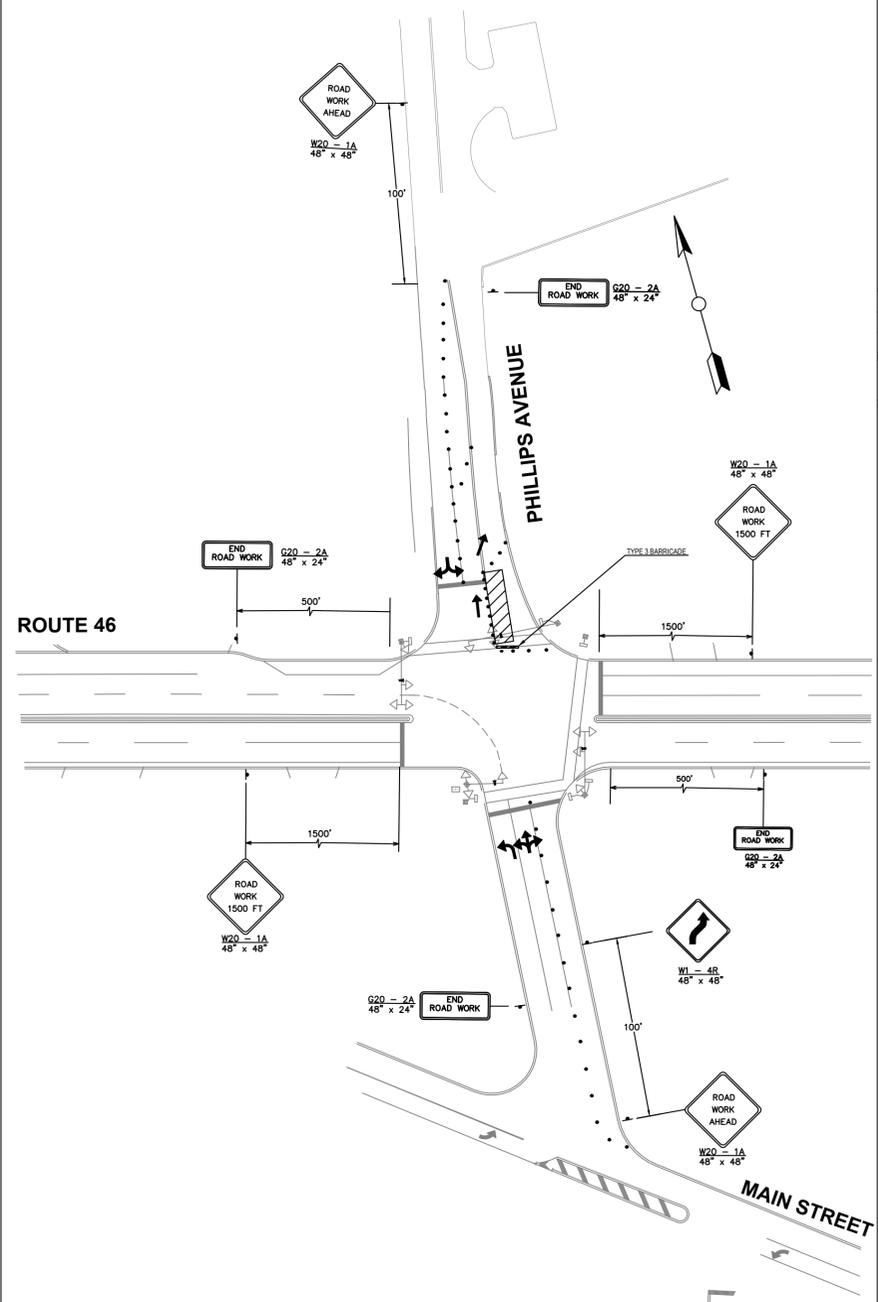


DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -13- 932: ROUTE 46 & INDUSTRIAL AVENUE/HOLLISTER ROAD TETERBORO BERGEN, NJ SCALE: 1"=30' NJMC PROJECT: PHASE 5 SHEET #: 44 OF 66
--	---	---	---

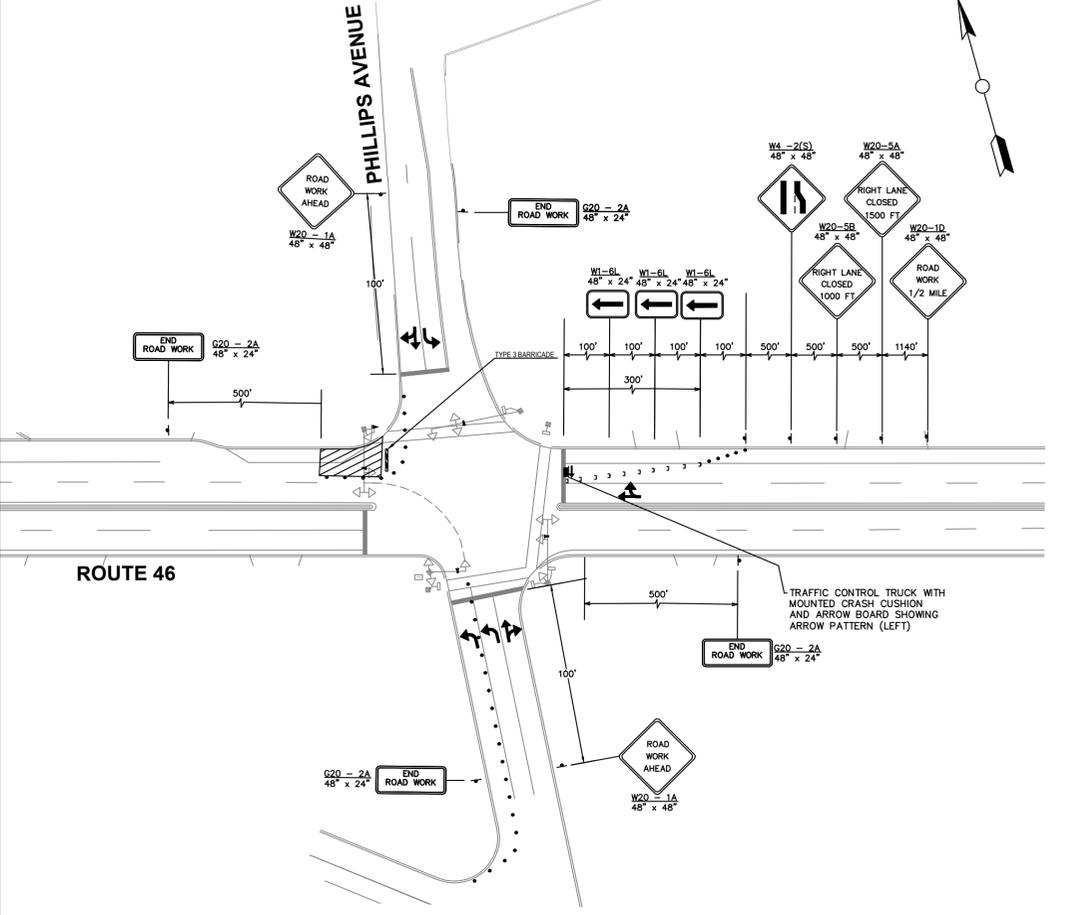
STAGE 1



STAGE 2



STAGE 3



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT (WEST OF PHILLIPS)= 50 MPH
 ROUTE 46 SPEED LIMIT (EAST OF PHILLIPS)= 40 MPH
 PHILLIPS AVENUE SPEED LIMIT = 30 MPH

REVISIONS:	
NO.	DESCRIPTION

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434
MASTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

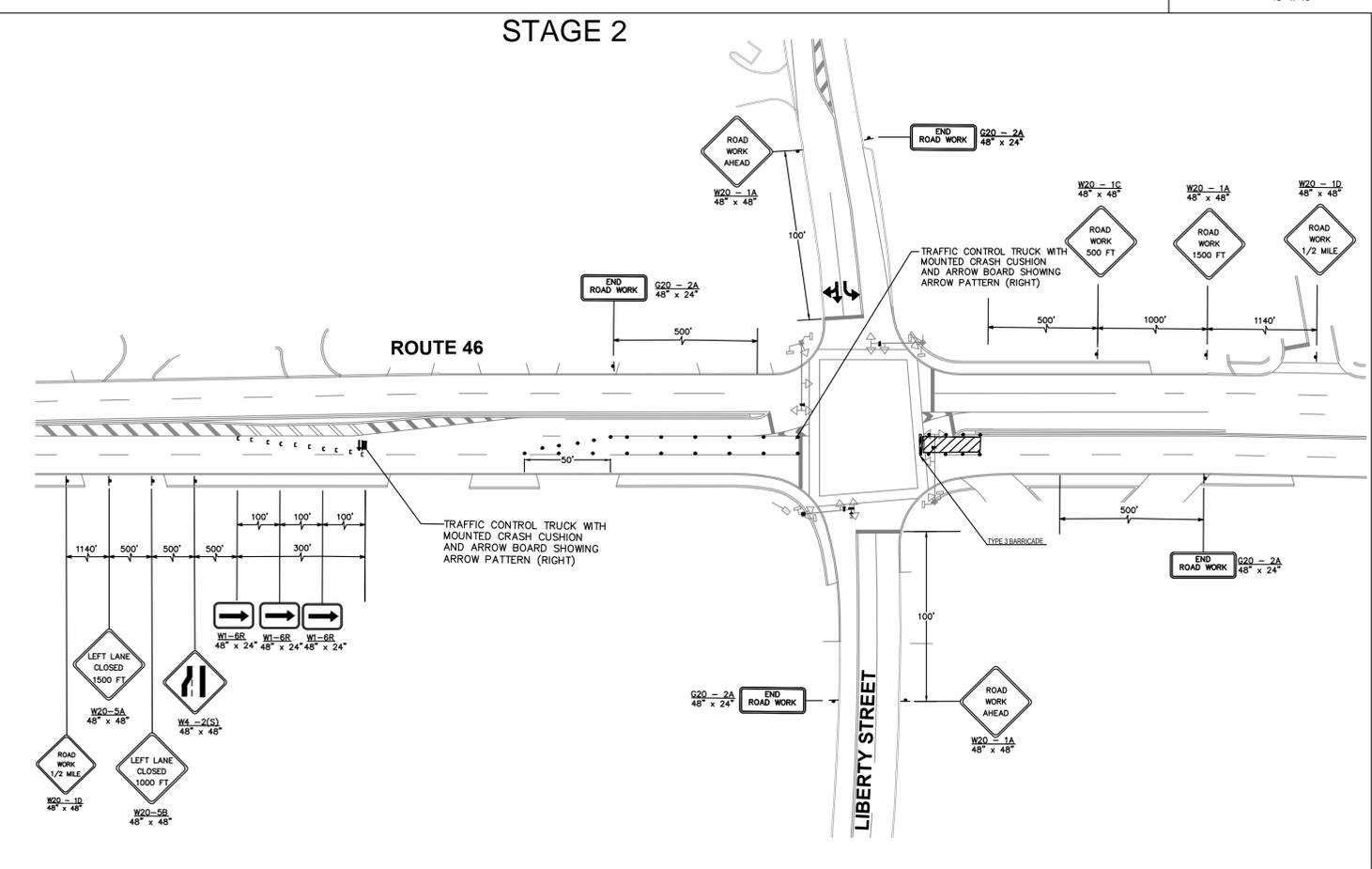
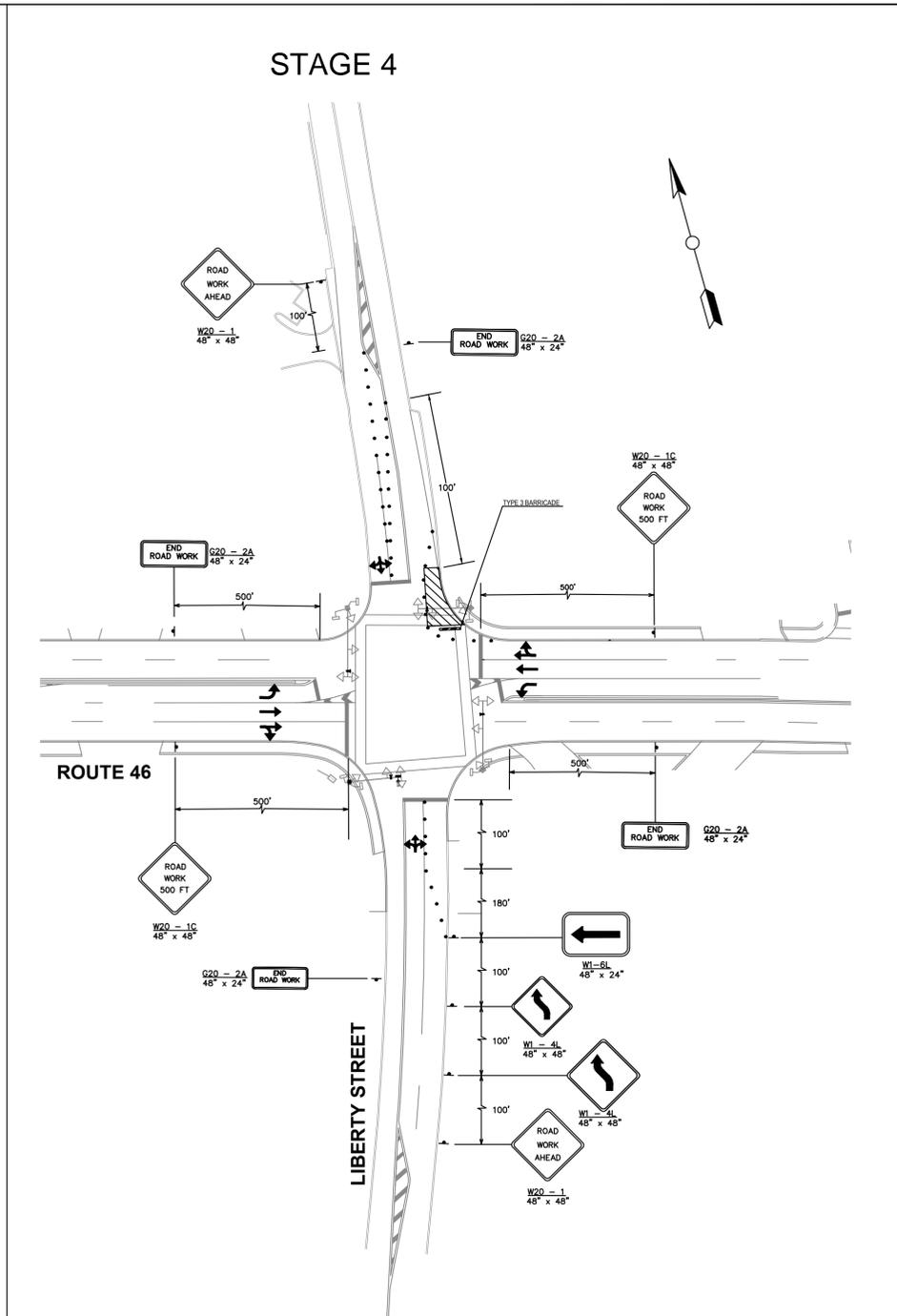
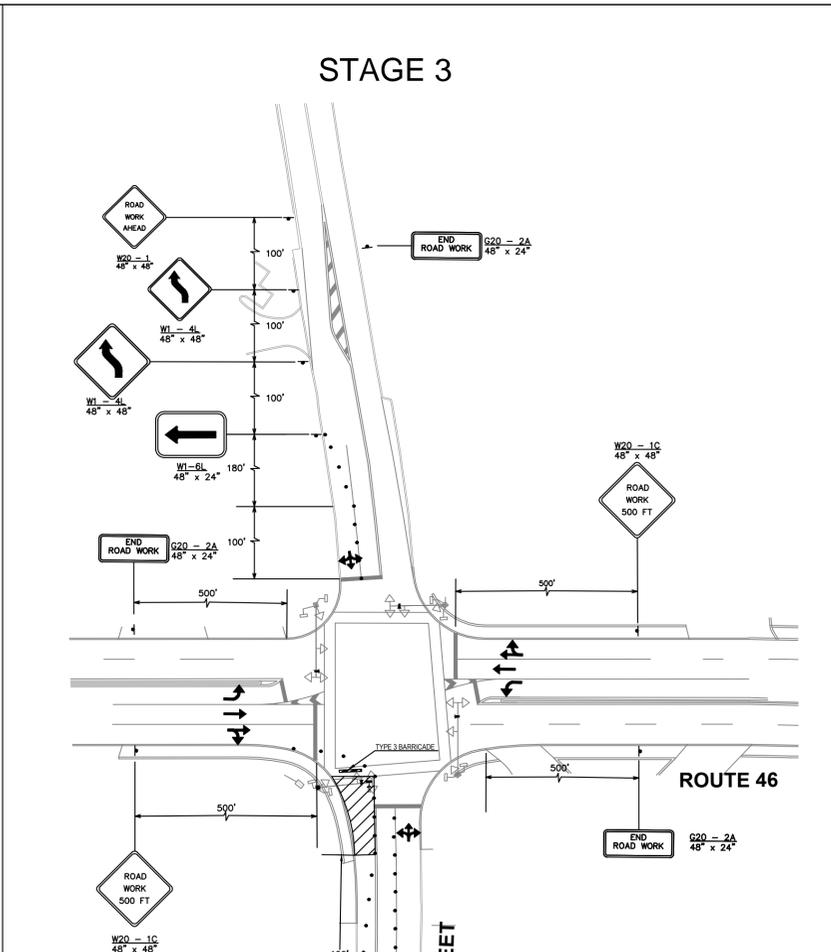
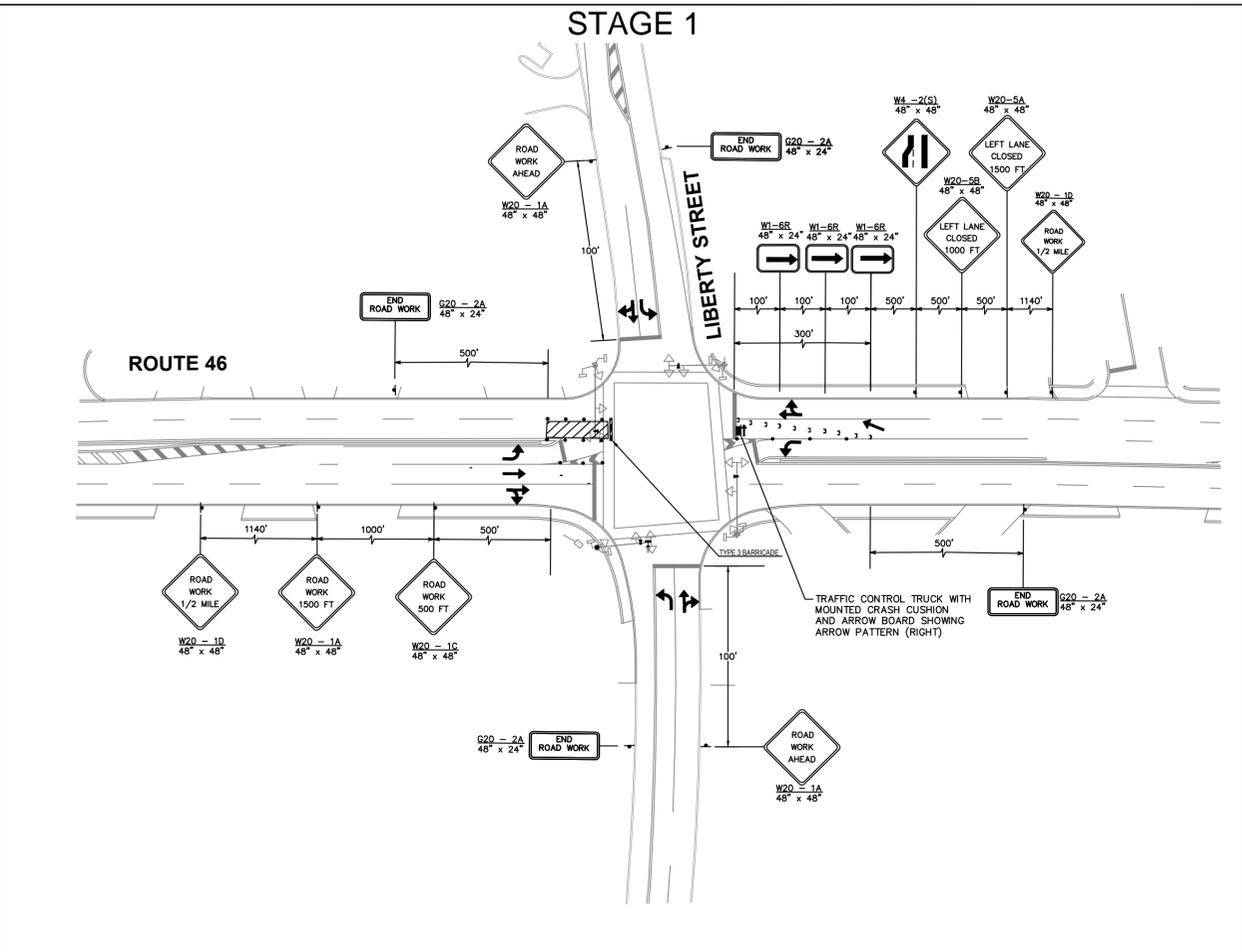


DRAWN BY: DN
 CHECKED BY: HY
 APPROVED BY: DL
 DATE: 8/01/14

DAVID LIEBGOLD
 PROFESSIONAL ENGINEER N.J. LIC. GE48897

HONG YUAN
 LEOMAR ALMANZAR
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -15-
 934: ROUTE 46 & PHILLIPS AVENUE
 SOUTH HACKENSACK BERGEN, NJ
 SCALE: 1"=50'
 N/JMC PROJECT: PHASE 5
 SHEET #: 46 OF 66



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 40 MPH
 LIBERTY SPEED LIMIT = 35 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN
 CHECKED BY: HY
 APPROVED BY: DL
 DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

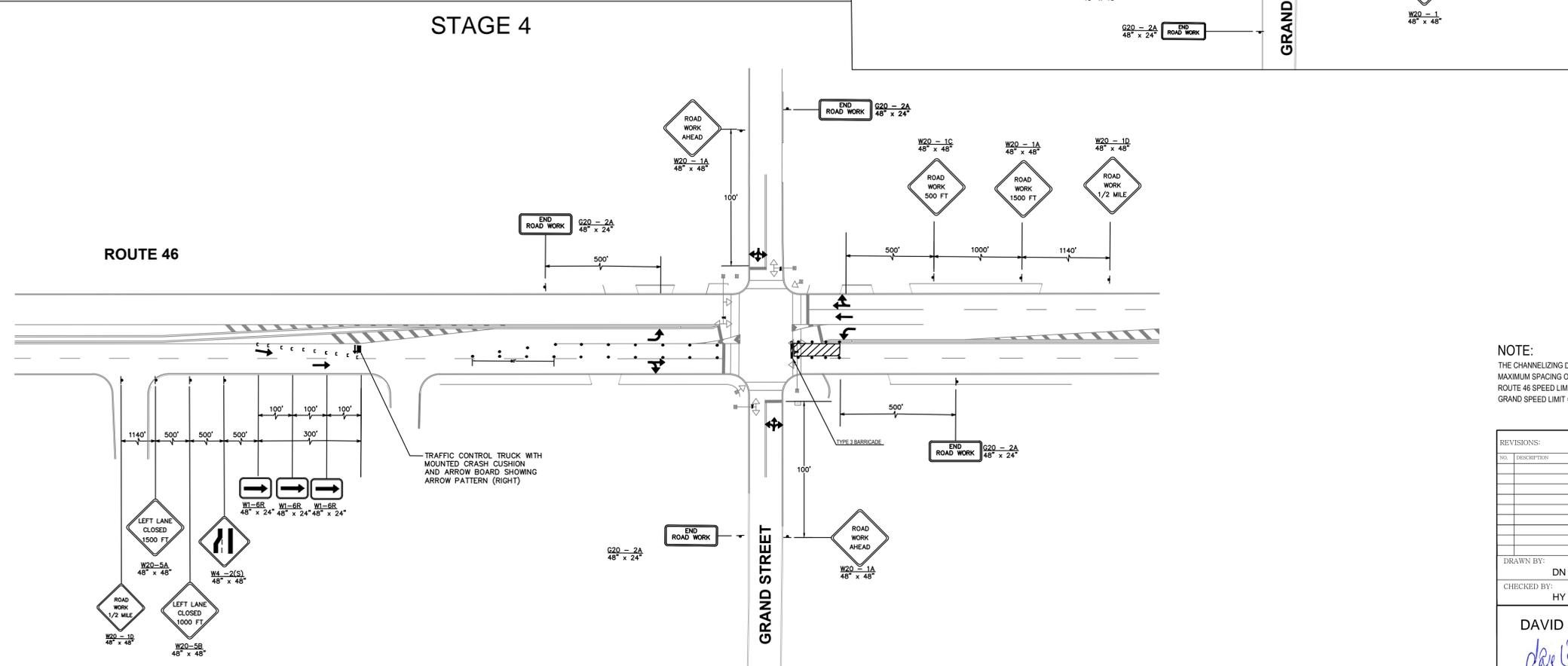
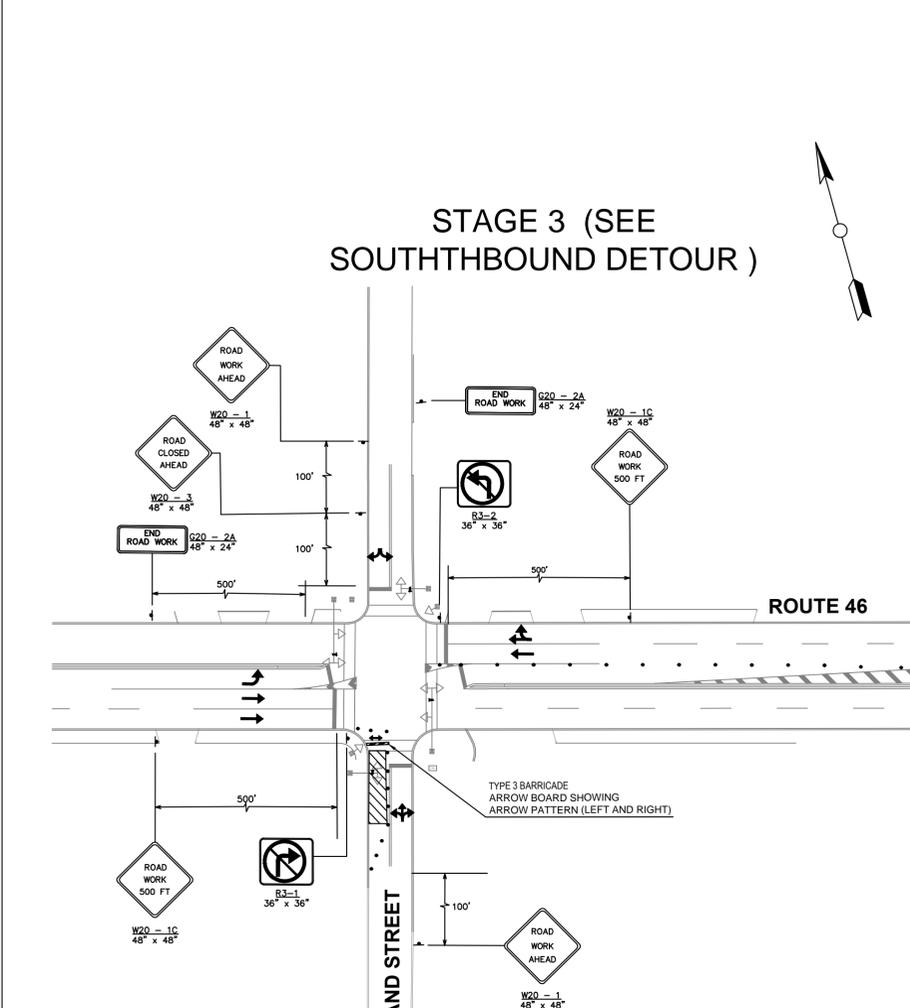
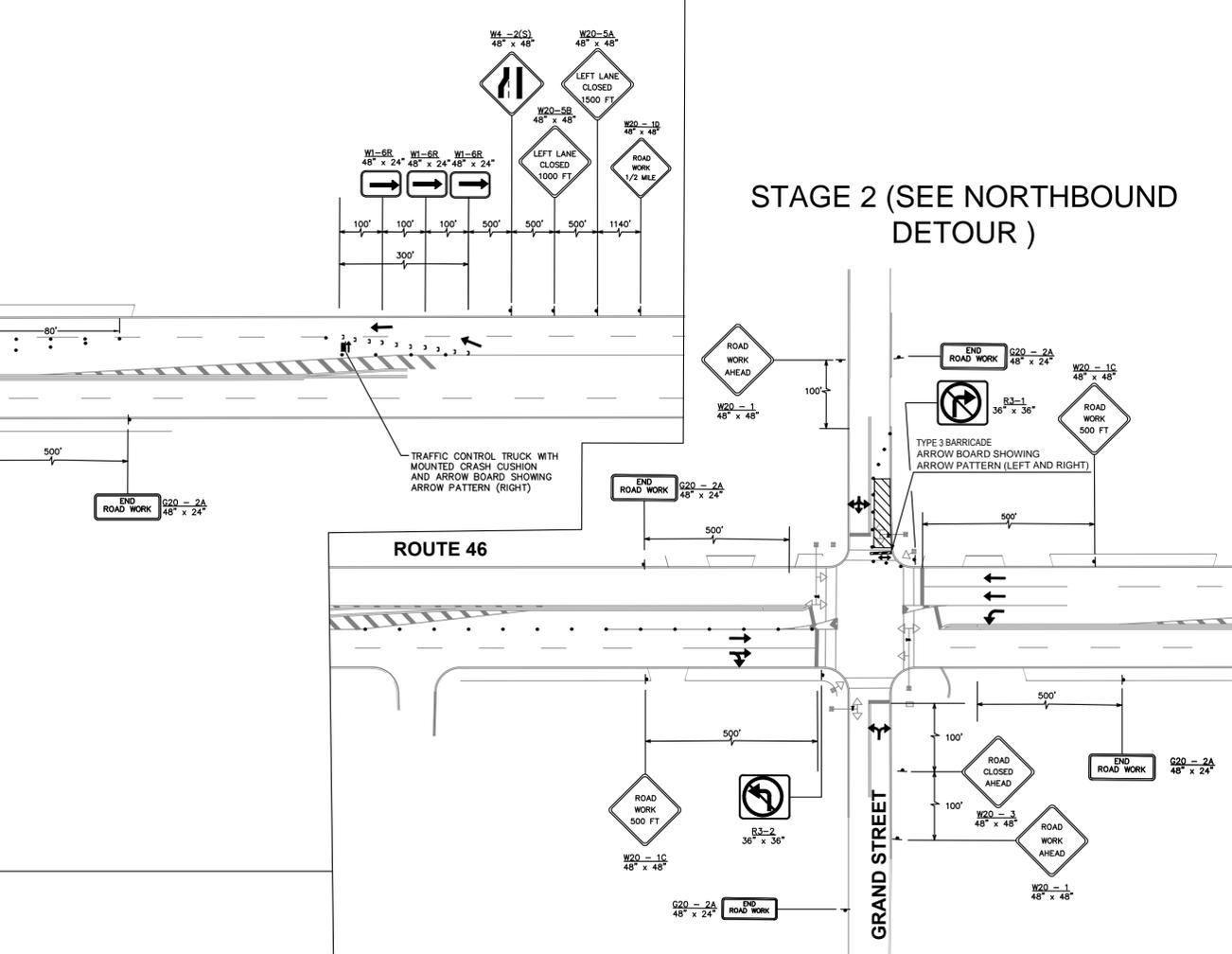
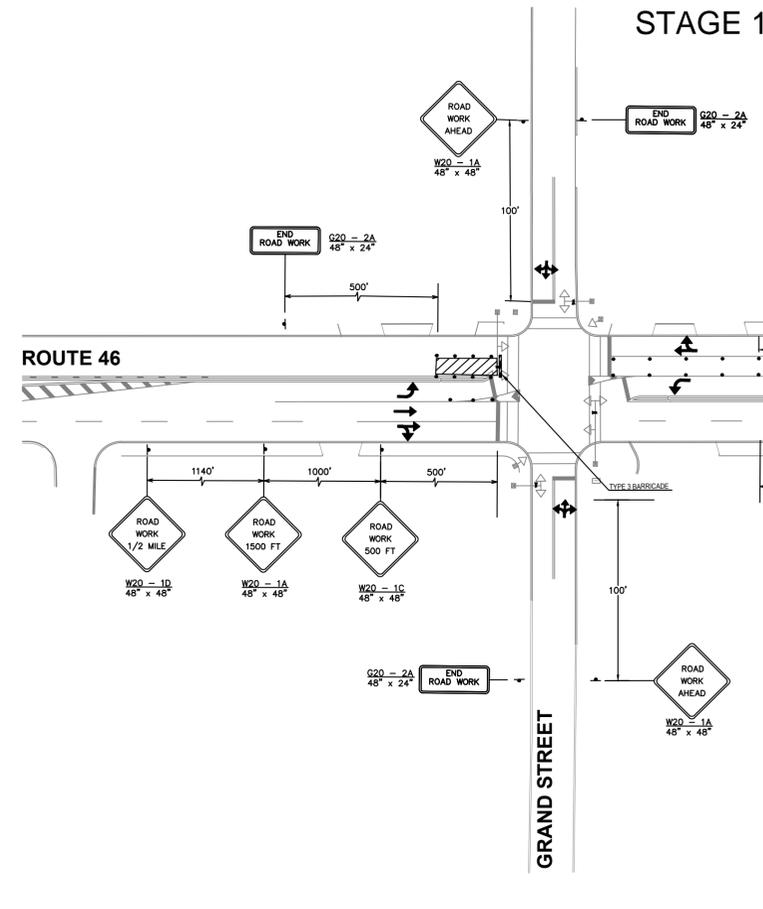


DAVID LIEBGOLD
David Liebgold
 PROFESSIONAL ENGINEER N.J. LIC. GE45897

HONG YUAN
Hong Yuan
 PROFESSIONAL ENGINEER N.J. LIC. GE48481

LEOMAR ALMANZAR
Leomar Almanzar
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -16-
 935: ROUTE 46 & LIBERTY STREET
 LITTLE FERRY BERGEN, NJ
 SCALE: 1"=50'
 N/JMC PROJECT: PHASE 5
 SHEET #: 47 OF 66



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 40 MPH
 GRAND SPEED LIMIT = 25 MPH

NO.	DESCRIPTION	DATE

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION







DRAWN BY: DN APPROVED BY: DL
 CHECKED BY: HY DATE: 8/01/14

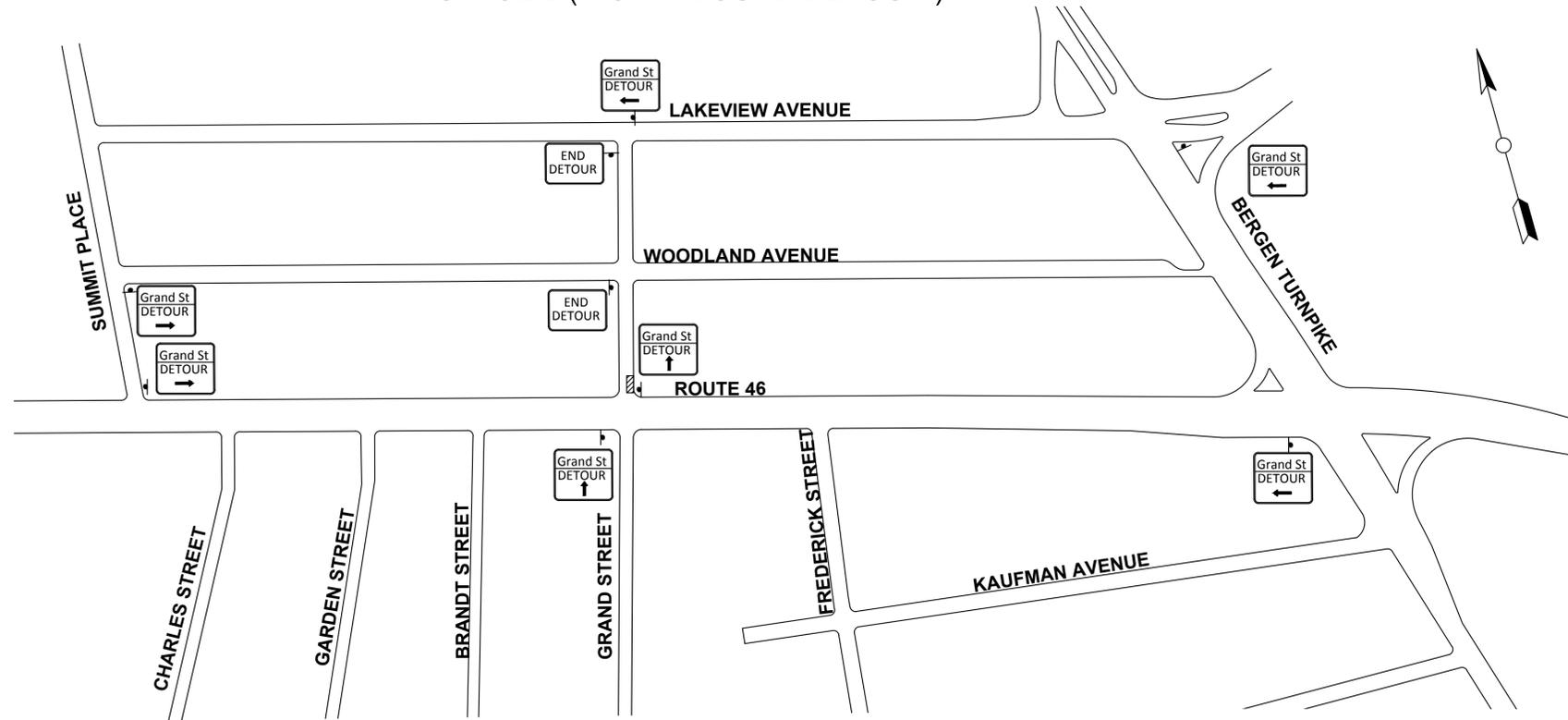
DAVID LIEBGOLD
David Liebgold
 PROFESSIONAL ENGINEER N.J. LIC. GE48897

HONG YUAN
Hong Yuan
 PROFESSIONAL ENGINEER N.J. LIC. GE488481

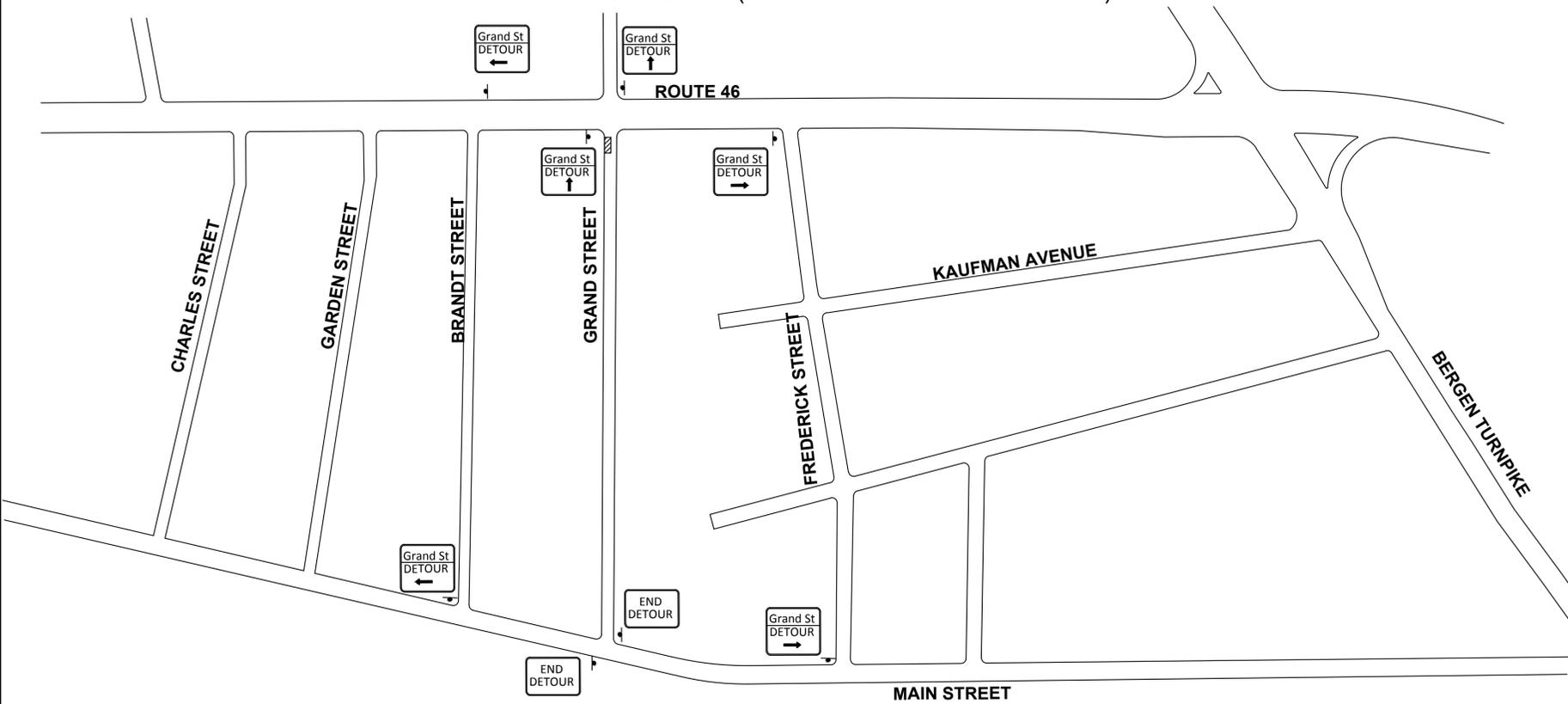
LEOMAR ALMANZAR
Leomar Almanzar
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -17-
 936: ROUTE 46 & GRAND STREET
 LITTLE FERRY BERGEN, NJ
 SCALE: 1"=50' N/JMC PROJECT: PHASE 5 SHEET #: 48 OF 66

STAGE 2 (NORTHBOUND DETOUR)



STAGE 3 (SOUTHBOUND DETOUR)



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 40 MPH
 GRAND SPEED LIMIT = 25 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

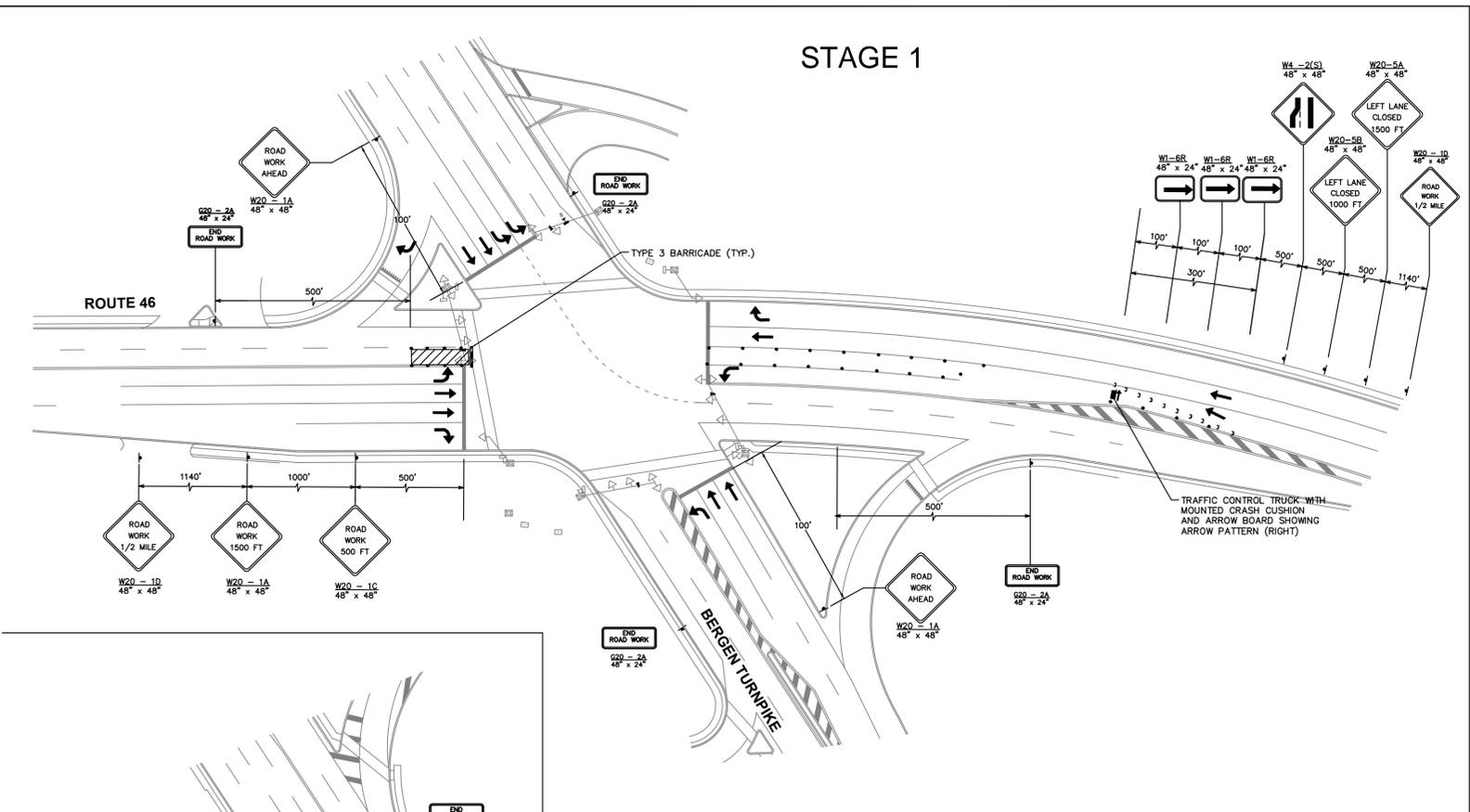
DRAWN BY: DN	APPROVED BY: DL
CHECKED BY: HY	DATE: 8/01/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

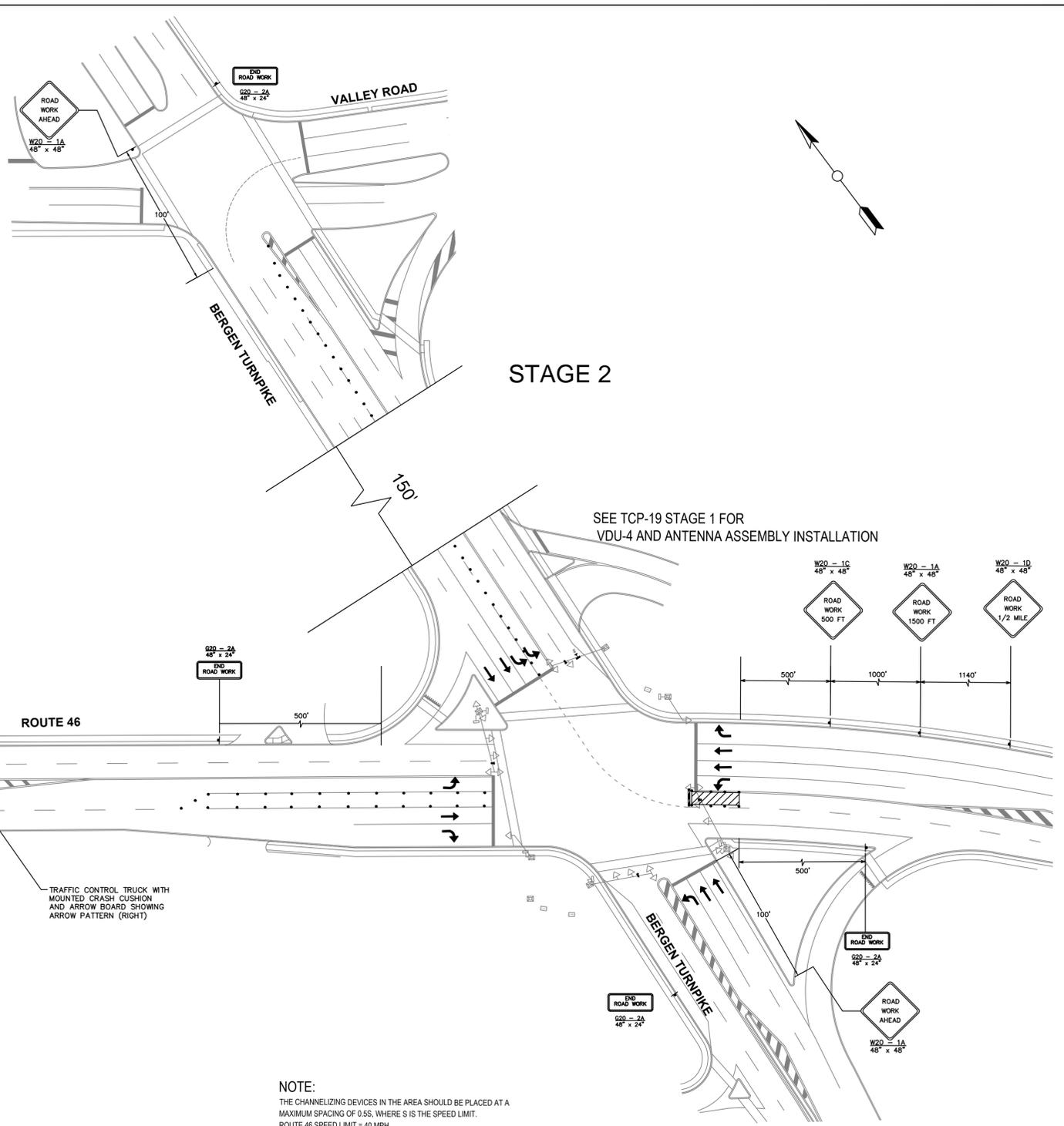
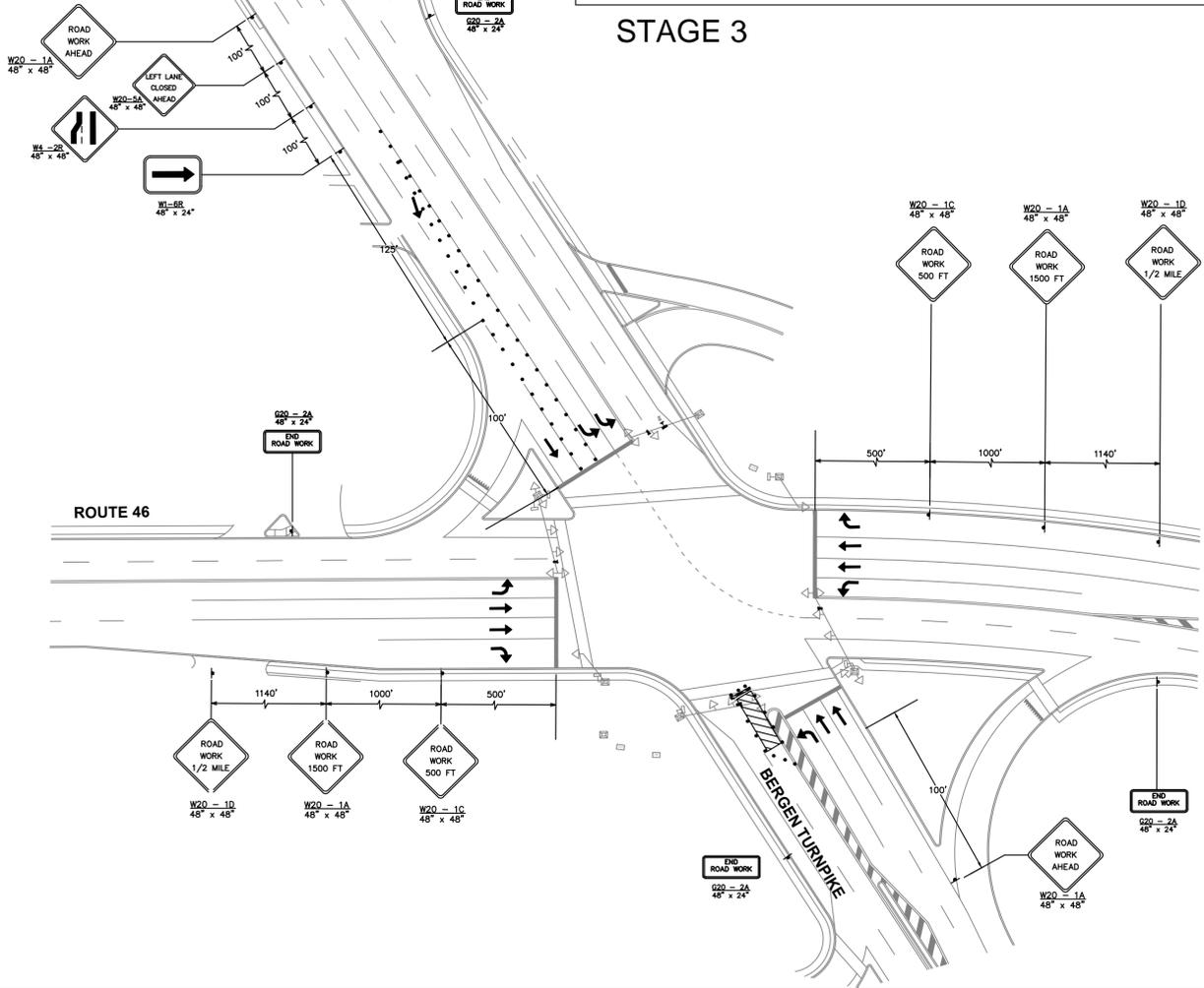
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE48897	HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -17A- 936: ROUTE 46 & GRAND STREET LITTLE FERRY BERGEN, NJ SCALE: N.T.S. N/JMC PROJECT: PHASE 5 SHEET #: 49 OF 66
---	--	--	--

STAGE 1



STAGE 3



SEE TCP-19 STAGE 1 FOR VDU-4 AND ANTENNA ASSEMBLY INSTALLATION

NOTE:
THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
ROUTE 46 SPEED LIMIT = 40 MPH
BERGEN TURNPIKE SPEED LIMIT = 25 MPH

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: DN
CHECKED BY: LA
APPROVED BY: HY
DATE: 7/25/14

NEW JERSEY MEADOWLANDS COMMISSION
ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

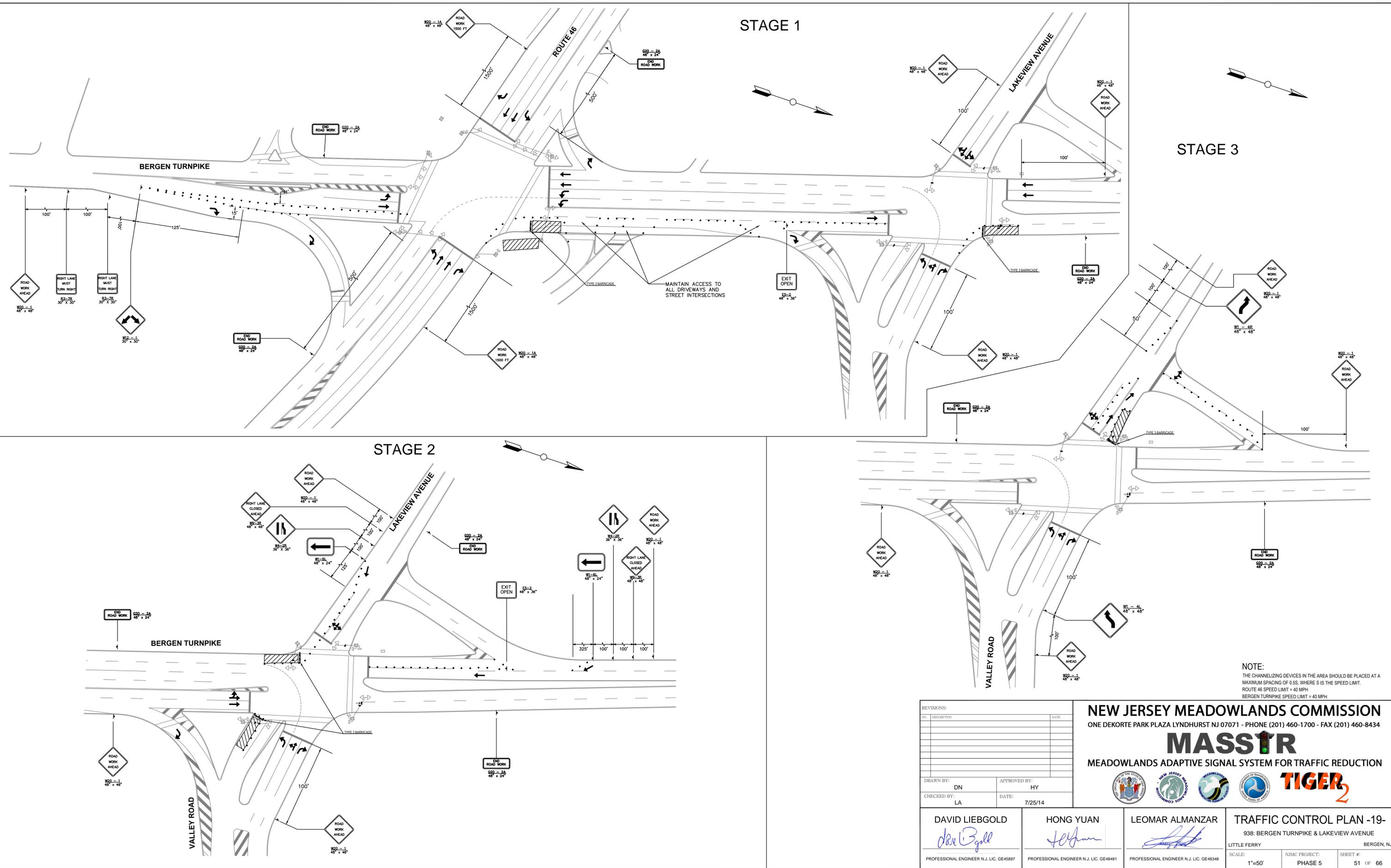


LEOMAR ALMANZAR
TRAFFIC CONTROL PLAN -18-
937: ROUTE 46 & BERGEN TURNPIKE
LITTLE FERRY BERGEN, NJ
SCALE: 1"=40'
N/JMC PROJECT: PHASE 5
SHEET #: 50 OF 66

DAVID LIEBGOLD
PROFESSIONAL ENGINEER N.J. LIC. GE45897

HONG YUAN
PROFESSIONAL ENGINEER N.J. LIC. GE48491

LEOMAR ALMANZAR
PROFESSIONAL ENGINEER N.J. LIC. GE48348



REVISIONS:

NO.	DESCRIPTION	DATE

DRAWN BY: DN APPROVED BY: HY
 CHECKED BY: LA DATE: 7/25/14

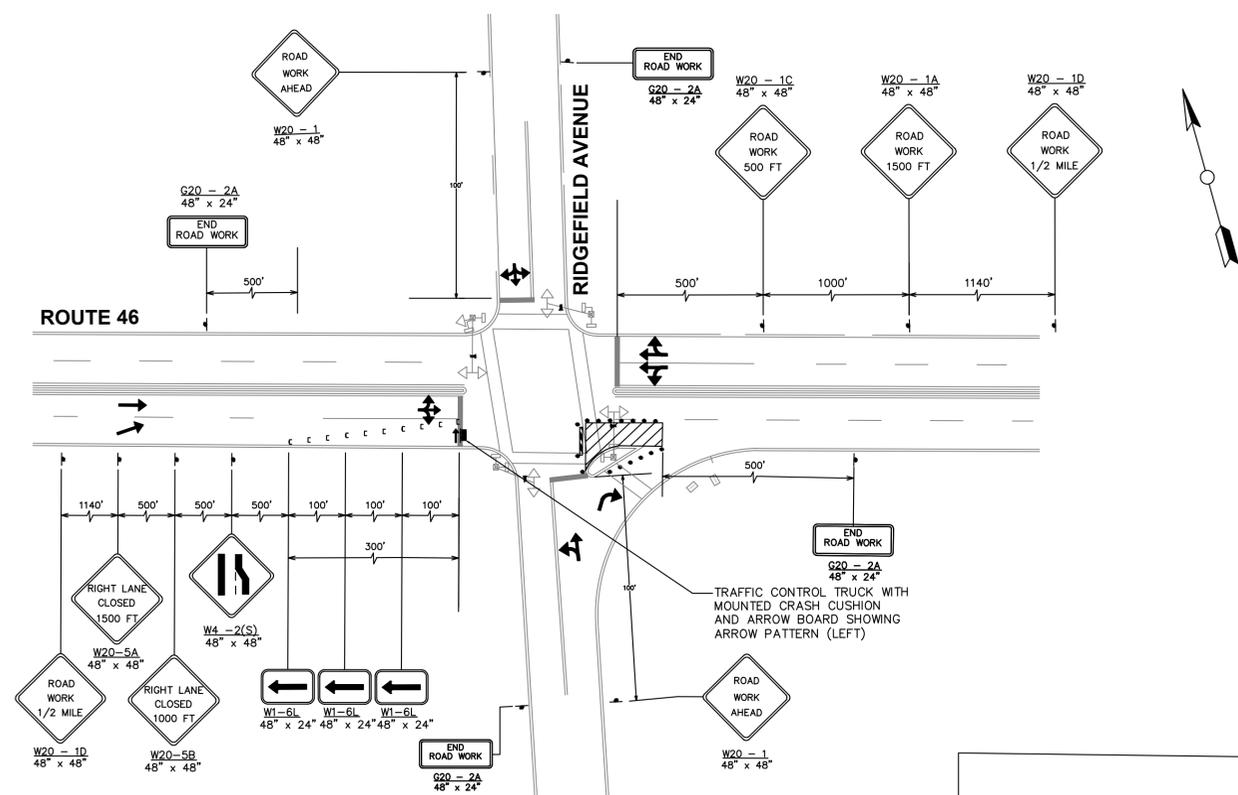
NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSIR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

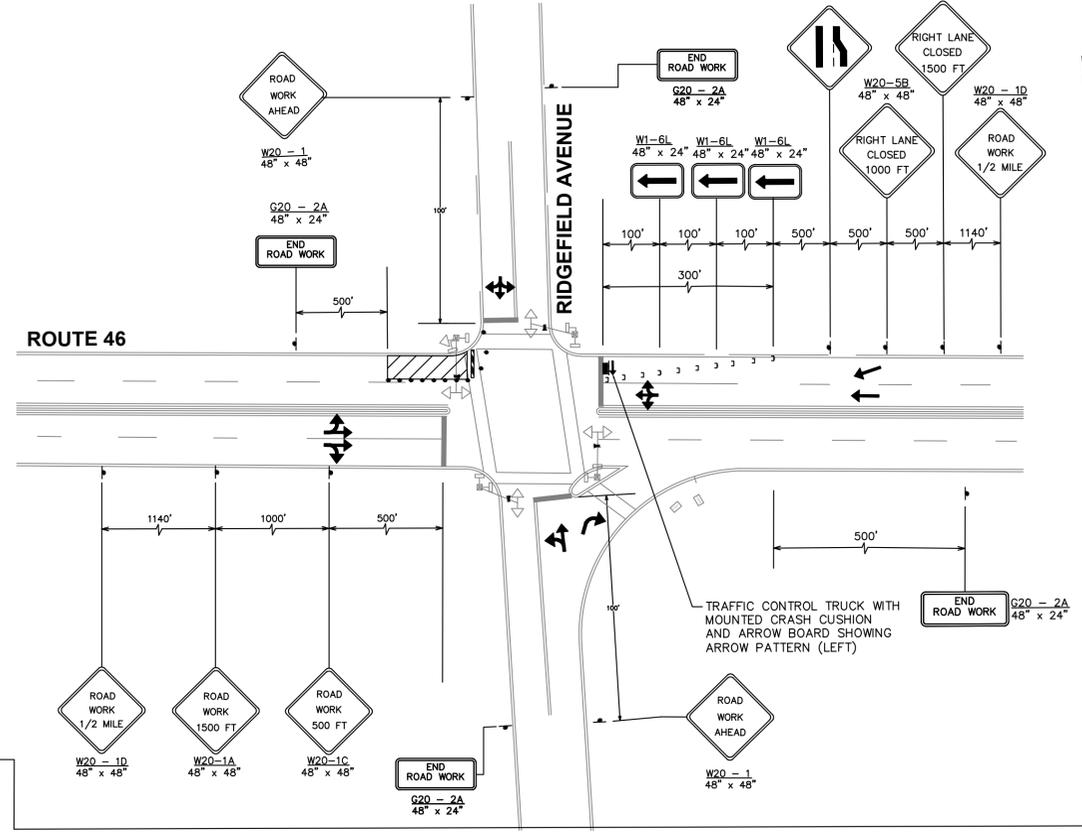


DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	TRAFFIC CONTROL PLAN -19- 938: BERGEN TURNPIKE & LAKEVIEW AVENUE LITTLE FERRY BERGEN, NJ
SCALE: 1"=50'	NJMC PROJECT: PHASE 5	SHEET #: 51 OF 66	

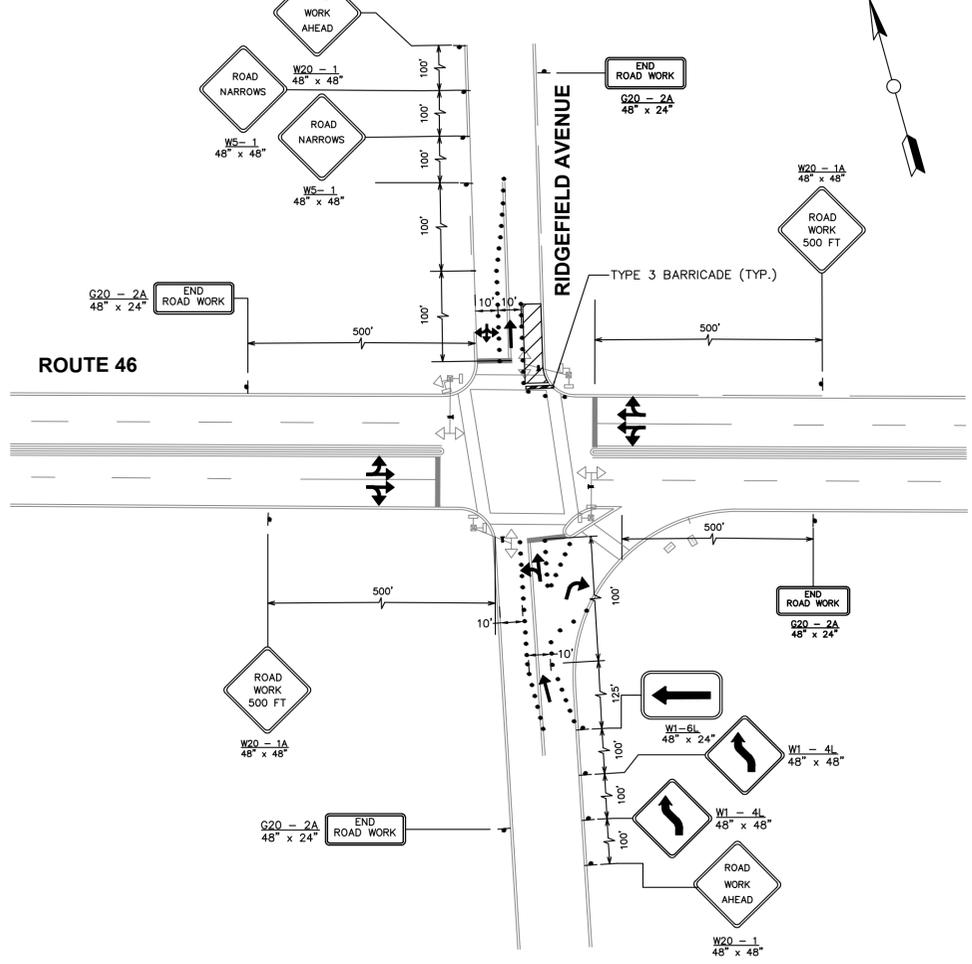
STAGE 1



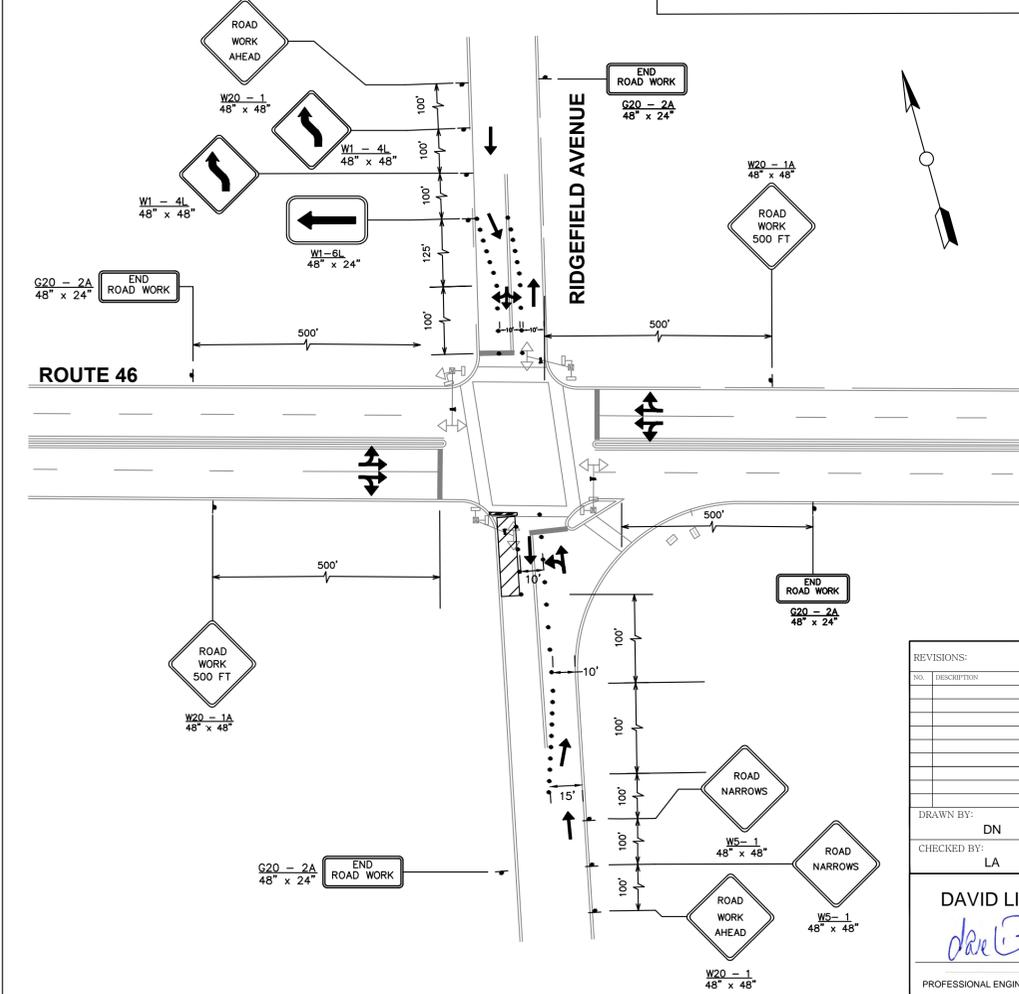
STAGE 2



STAGE 3



STAGE 4



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 40 MPH
 RIDGEFIELD AVENUE SPEED LIMIT = 25 MPH

REVISIONS:

NO.	DESCRIPTION	DATE

DRAWN BY: DN APPROVED BY: HY
 CHECKED BY: LA DATE: 7/25/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

DAVID LIEBGOLD
David Liebgold
 PROFESSIONAL ENGINEER N.J. LIC. GE45897

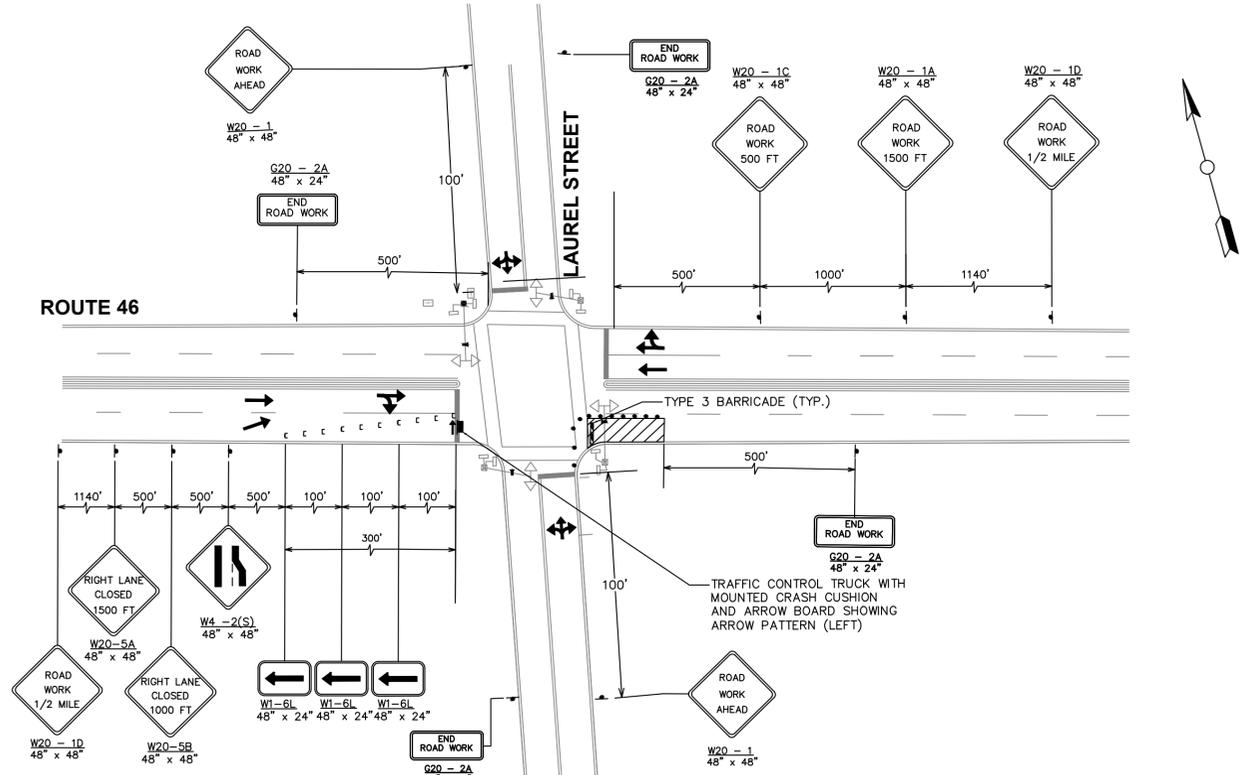
HONG YUAN
Hong Yuan
 PROFESSIONAL ENGINEER N.J. LIC. GE48491

LEOMAR ALMANZAR
Leomar Almanzar
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

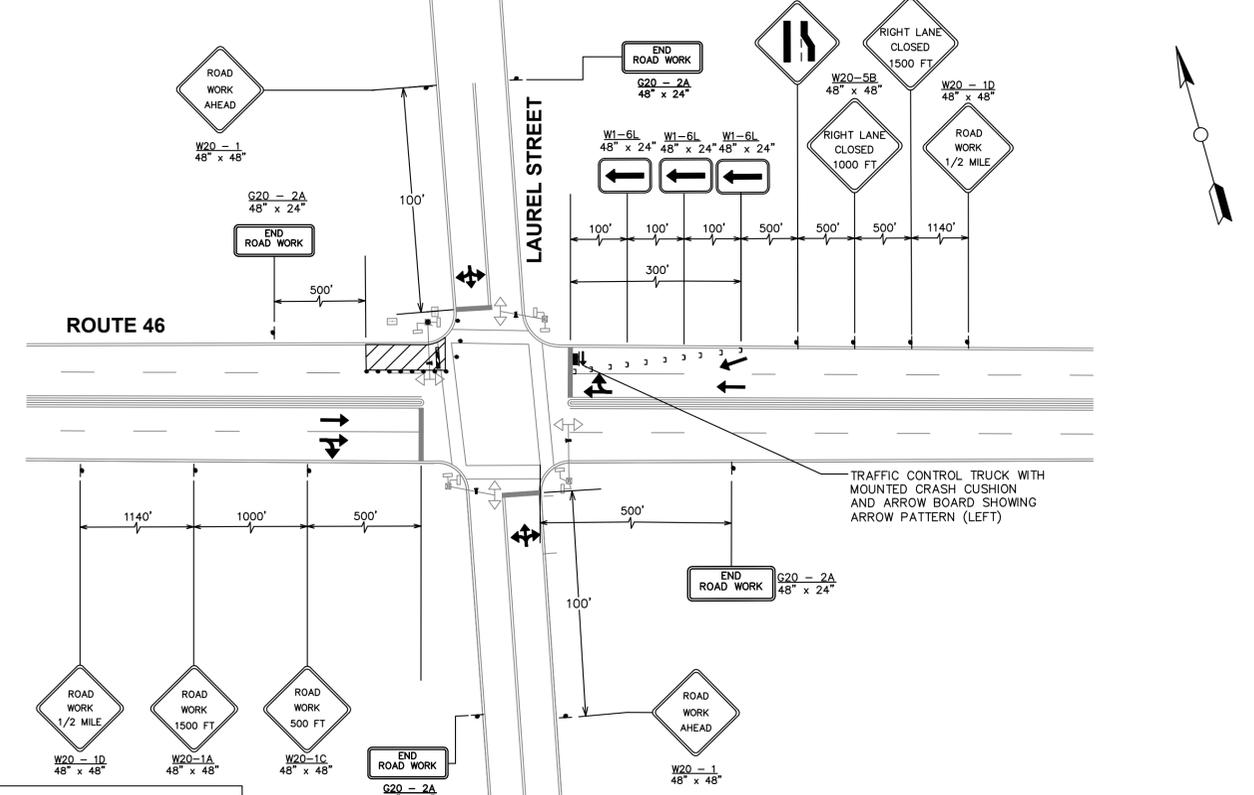
TRAFFIC CONTROL PLAN -20-
 939: ROUTE 46 & RIDGEFIELD AVENUE
 RIDGEFIELD PARK BERGEN, NJ

SCALE: 1"=40'
 N/JMC PROJECT: PHASE 5
 SHEET #: 52 OF 66

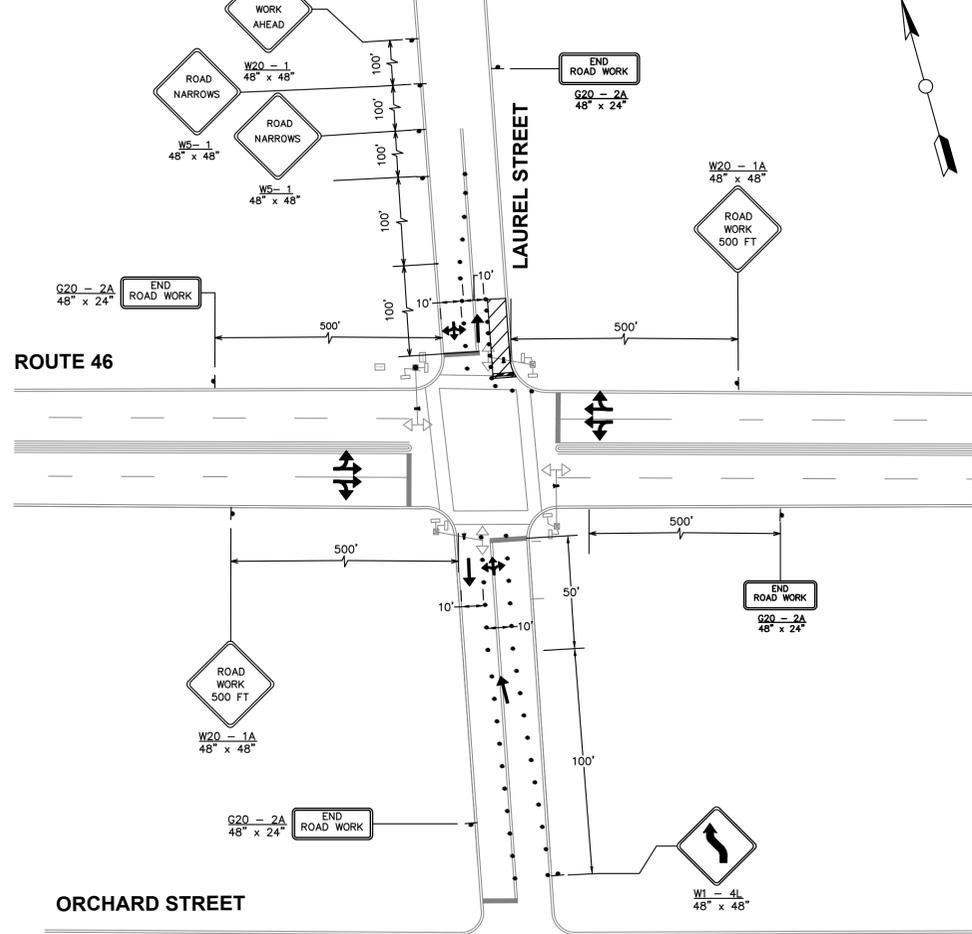
STAGE 1



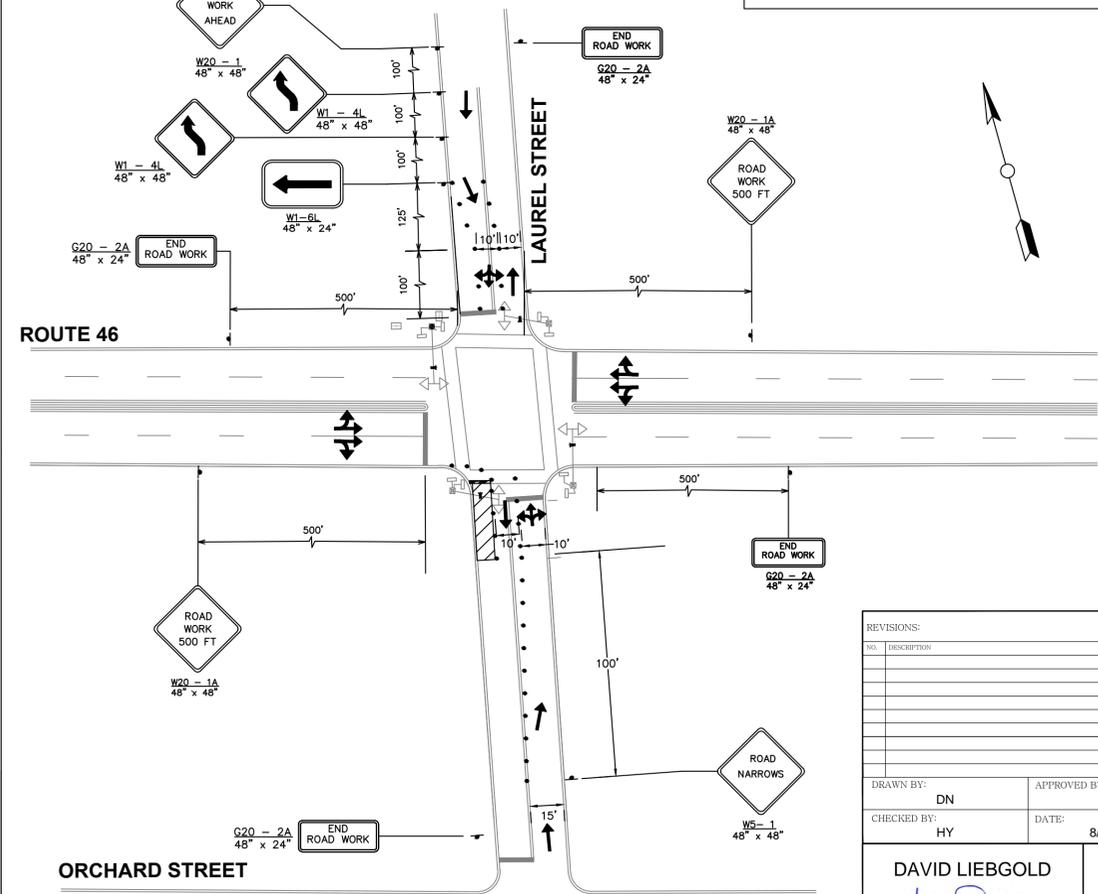
STAGE 2



STAGE 3



STAGE 4



NOTE:
 THE CHANNELIZING DEVICES IN THE AREA SHOULD BE PLACED AT A
 MAXIMUM SPACING OF 0.5S, WHERE S IS THE SPEED LIMIT.
 ROUTE 46 SPEED LIMIT = 40 MPH
 LAUREL STREET SPEED LIMIT = 25 MPH

REVISIONS:	
NO.	DESCRIPTION

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



DRAWN BY: DN
 CHECKED BY: HY

David Liebgold

PROFESSIONAL ENGINEER N.J. LIC. GE45897

APPROVED BY: DL
 DATE: 8/01/14

Hong Yuan

PROFESSIONAL ENGINEER N.J. LIC. GE48348

LEOMAR ALMANZAR

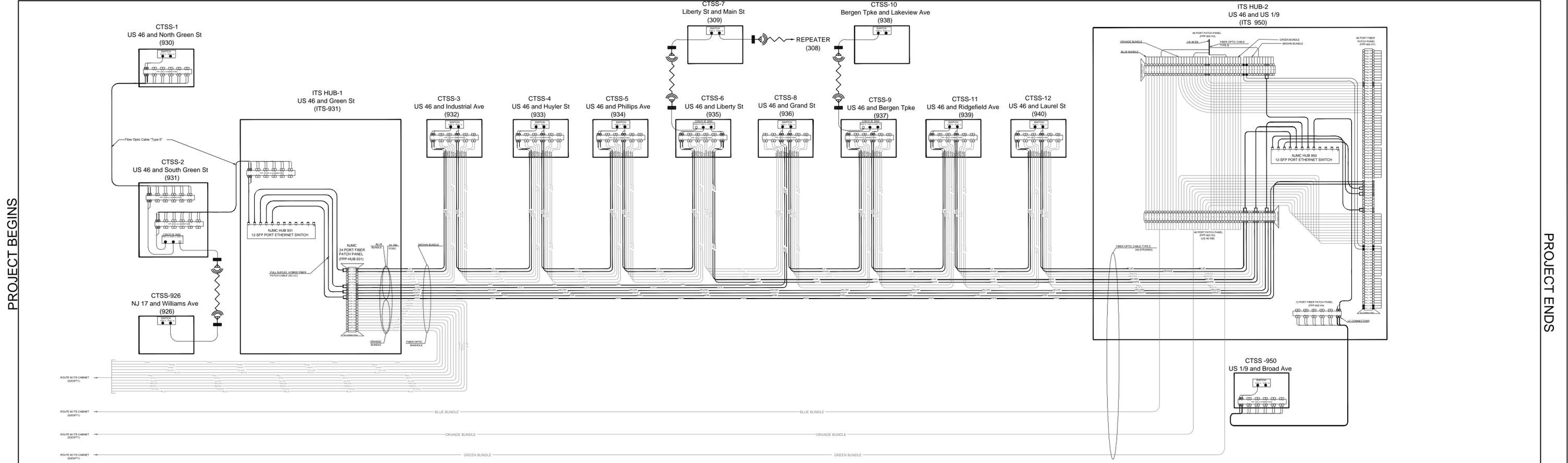
Leomar Almanzar

PROFESSIONAL ENGINEER N.J. LIC. GE48348

TRAFFIC CONTROL PLAN -21-
 940: ROUTE 46 & LAUREL STREET
 RIDGEFIELD PARK BERGEN, NJ

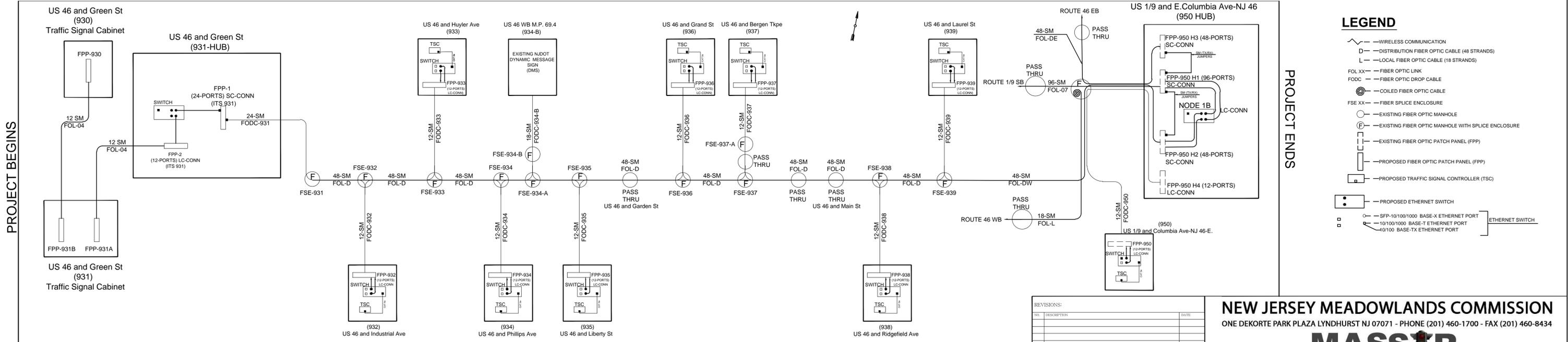
SCALE: 1"=40'
 N/JMC PROJECT: PHASE 5
 SHEET #: 53 OF 66

FIBER OPTIC CABLE TYPE A ('D' CABLE)



PROJECT BEGINS

PROJECT ENDS



PROJECT BEGINS

PROJECT ENDS

FIBER OPTIC COMMUNICATION SCHEMATIC

- LEGEND**
- — FIBER OPTIC PORT SPARE
 - — FIBER OPTIC PORT ASSIGNED TO NJDOT
 - ▨ — FIBER OPTIC PORT USED BY NJDOT DEVICES (I.E. CTSS, DMS, ETC.)
 - ▩ — FIBER OPTIC PORT ASSIGNED TO NJMC
 - ⊗ — FIBER OPTIC PORT ASSIGNED TO THE NJDOT-MASSTR EXPANSION PROJECT
 - ⊙ — FIBER OPTIC PORT USED BY OTHER DEVICES (I.E. SERVERS)
 - ⊠ — PORT USED FOR NJDOT CTSS, TO BE ABANDONED IN PLACE
 - ⊚ — FIBER OPTIC STRANDS COILED IN SPLICE ENCLOSURE

- LEGEND**
- — WIRELESS COMMUNICATION
 - D — DISTRIBUTION FIBER OPTIC CABLE (48 STRANDS)
 - L — LOCAL FIBER OPTIC CABLE (18 STRANDS)
 - FOL XX — FIBER OPTIC LINK
 - FODC — FIBER OPTIC DROP CABLE
 - ⊙ — COILED FIBER OPTIC CABLE
 - FSE XX — FIBER SPLICE ENCLOSURE
 - ⊙ — EXISTING FIBER OPTIC MANHOLE
 - ⊙ — EXISTING FIBER OPTIC MANHOLE WITH SPLICE ENCLOSURE
 - ⊙ — EXISTING FIBER OPTIC PATCH PANEL (FPP)
 - ⊙ — PROPOSED FIBER OPTIC PATCH PANEL (FPP)
 - ⊙ — PROPOSED TRAFFIC SIGNAL CONTROLLER (TSC)
 - ⊙ — PROPOSED ETHERNET SWITCH
 - ⊙ — SFP-10/100/1000 BASE-X ETHERNET PORT
 - ⊙ — 10/100/1000 BASE-T ETHERNET PORT
 - ⊙ — 10/100 BASE-TX ETHERNET PORT

REVISIONS:

NO.	DESCRIPTION	DATE

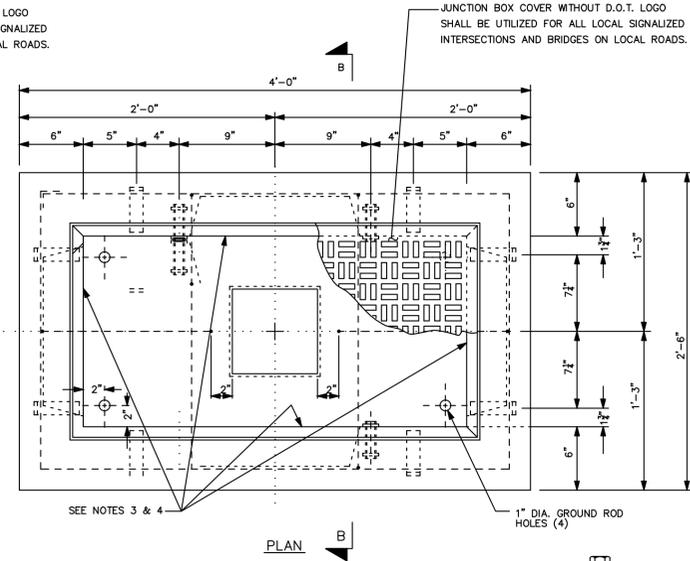
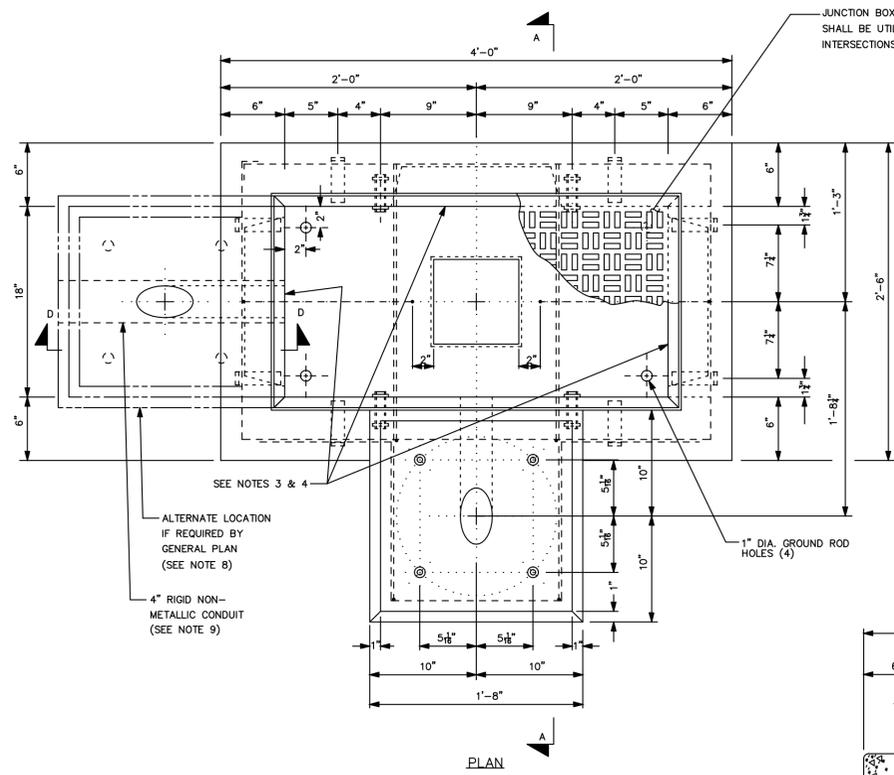
DRAWN BY: LA APPROVED BY: DL
 CHECKED BY: DL DATE: 7/25/2014

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45887	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48481	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE43848	FIBER OPTIC BLOCK WIRING DIAGRAM & SCHEMATIC ROUTE U.S. 46 BERGEN, NJ
SCALE: N.T.S.	NJMC PROJECT: PHASE 5	SHEET #: 54 OF 66	



ITEM

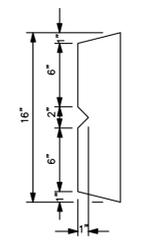
JUNCTION BOX FOUNDATION "JBF"

MARK	SIZE NO. 4 RODS			NO. RODS REQ.
	A	B	C	
I	41"	40"	40"	2
II	40"	24"	—	2
III	19"	—	—	2
IV	15"	16"	12"	4
V	44"	26"	4"	4
VI	1"	15"	—	2
VII	15"	26"	—	2
VIII	40"	59"	—	2
IX	15"	16"	4"	4

ITEM

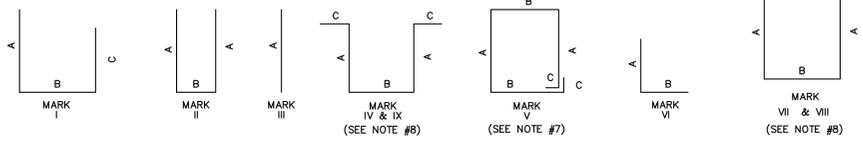
18" X 36" JUNCTION BOX "JB"

MARK	SIZE NO. 4 RODS			NO. RODS REQ.
	A	B	C	
II	42"	25"	—	4
III	21"	—	—	2
V	44"	26"	4"	3
VI	2"	16"	—	2
VII	15"	26"	—	2



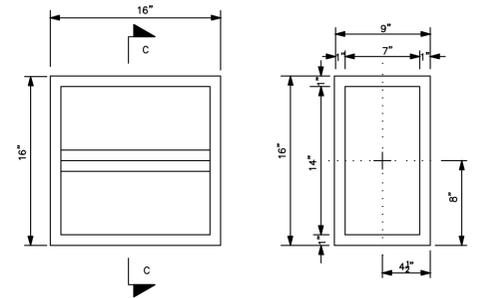
ALTERNATE RECESS ARRANGEMENT FOR END WALLS.

DETAIL "A"



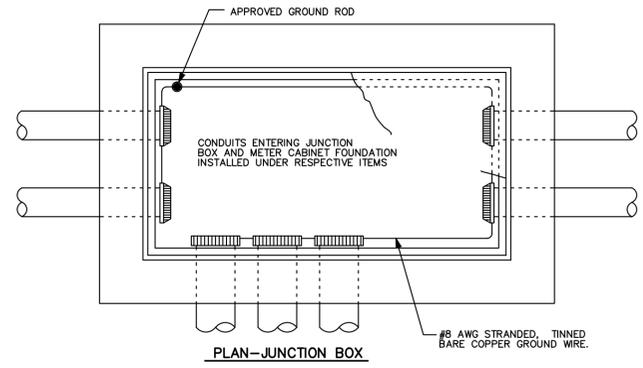
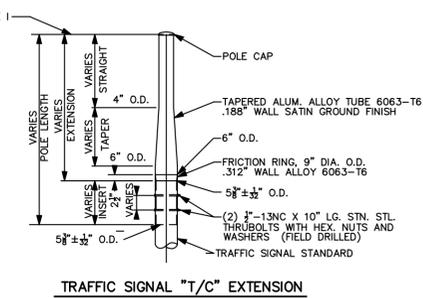
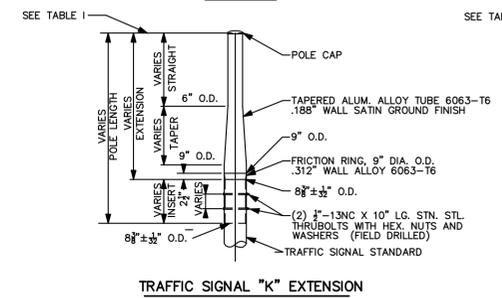
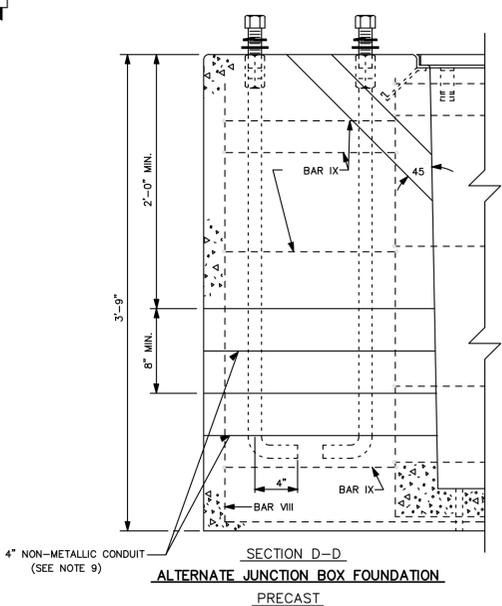
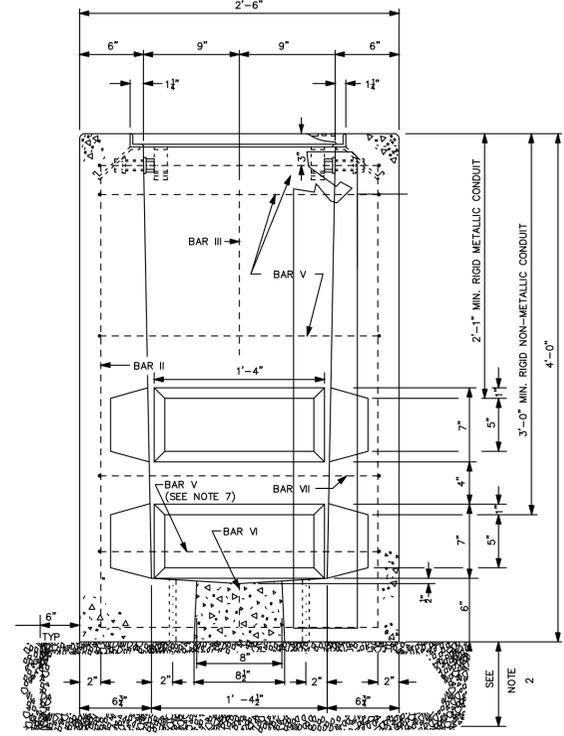
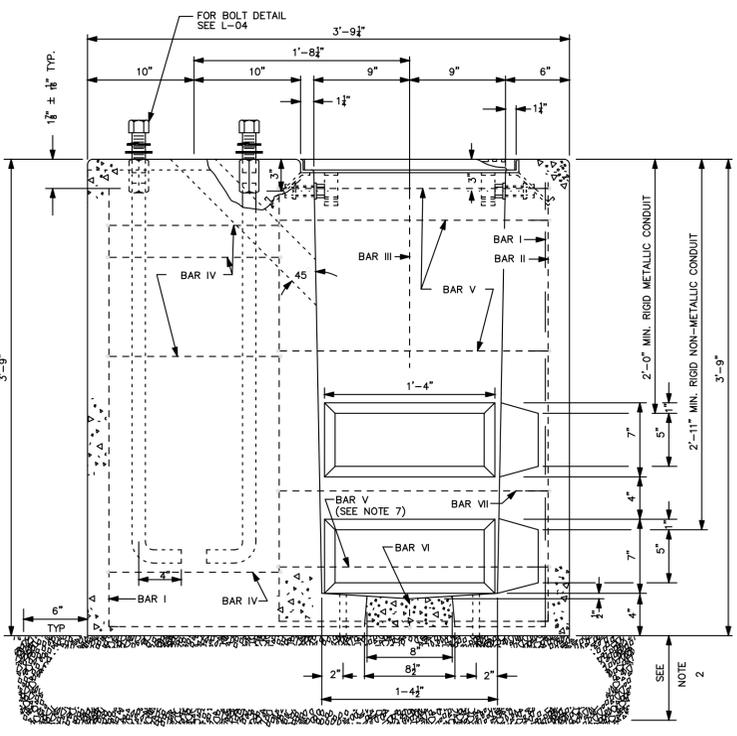
NOTES:

- 1.) THE CONSTRUCTION AND INSTALLATION OF PRECAST JUNCTION BOX FOUNDATION AND 18" X 36" JUNCTION BOX SHALL CONFORM TO SPECIFICATIONS FOR THE CONTRACT AND TO DETAILS AND NOTES SHOWN ON THIS DRAWING AND SHALL INCLUDE APPLICABLE NOTES AND DETAILS SHOWN ON DRAWING FOR CAST-IN-PLACE TYPE.
- 2.) COMPACTED 3/4" GRAVEL OR BROKEN STONE BASE REQUIRED FOR ALL PRECAST UNITS. MINIMUM DEPTH 6".
- 3.) A 16" X 7" X 4" RECESS TO BE PROVIDED IN SIDE AND END WALLS AS SHOWN.
- 4.) AFTER THE INSTALLATION OF CONDUIT, ALL OPEN RECESSES ARE TO BE COMPLETELY BRICKED AND FINISHED.
- 5.) AN ALTERNATE RECESS ARRANGEMENT MAY BE SUBSTITUTED AS SHOWN BELOW IN DETAIL "A" & "B". IF THIS ARRANGEMENT IS USED AND THE CONDUIT IS BROUGHT INTO THE JUNCTION BOX THROUGH THE TOP OF THE RECESS THEN THE ENTIRE RECESS MUST BE BRICKED FROM TOP TO BOTTOM.
- 6.) PRECAST JUNCTION BOX FOUNDATION MAY BE INSTALLED BEHIND THE GUIDE RAIL OR IN AREAS WHERE THE SLOPE IS LESS THAN 1:22.
- 7.) INSTALL THIS BAR WHEN USING DETAIL "A" ONLY.
- 8.) FOR ALTERNATE LOCATION FOR THE FOUNDATION, USE MARK VII AND IX IN PLACE OF MARK I AND IV.
- 9.) ALIGN CONDUITS.



ALTERNATE RECESS (VERTICAL) ARRANGEMENT FOR SIDE WALLS.

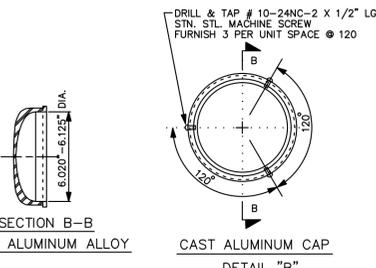
DETAIL "B"



- NOTE:
1. FURNISH WITH EACH STANDARD:
 - (1) FRICTION RING, 9" DIA. O.D. .312" WALL ALLOY 6063-T6
 - (1) POLE CAP
 - (2) 1"-13NC X 10" LG. STN. STL. THRU BOLTS WITH STN. STL. HEX NUTS AND STN. STL. WASHERS
 2. CERTIFICATIONS SHALL BE FURNISHED THAT ALUMINUM ALLOY AND TEMPER SHOWN MEET REQUIREMENTS AS SET FORTH BELOW OR AS OTHERWISE INDICATED ON DRAWING.
 3. CONTRACTOR SHALL PROVIDE DESIGN OF EXTENSIONS, INCLUDING FINAL DIMENSIONS, CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

TABLE 1 - EXTENSION POLE

POLE TYPE	POLE LENGTH (FT)	EXTENSION (FT)	TAPER (FT)	STRAIGHT (FT)	INSERT (FT)
C					
T		8.7			
K		17.5			



REVISIONS:

NO.	DESCRIPTION	DATE

DRAWN BY: LA

APPROVED BY: DL

CHECKED BY: HY

DATE: 7/25/14

DAVID LIEBGOLD

PROFESSIONAL ENGINEER N.J. LIC. GE46897

HONG YUAN

PROFESSIONAL ENGINEER N.J. LIC. GE48491

LEOMAR ALMANZAR

PROFESSIONAL ENGINEER N.J. LIC. GE48348

CONSTRUCTION DETAILS -1-

SCALE: N.T.S.

NJMC PROJECT: PHASE 5

SHEET #: 55 OF 66

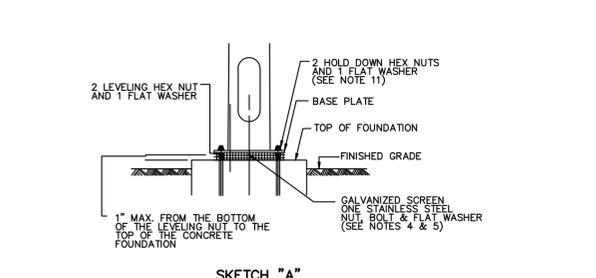
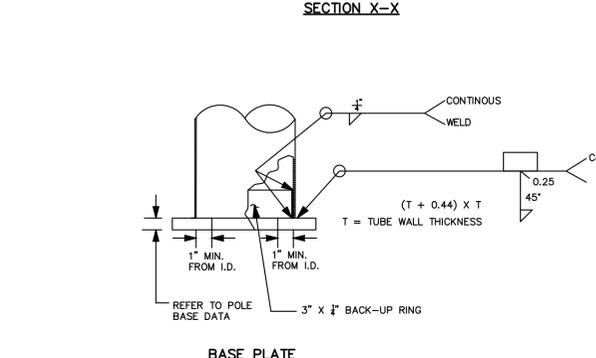
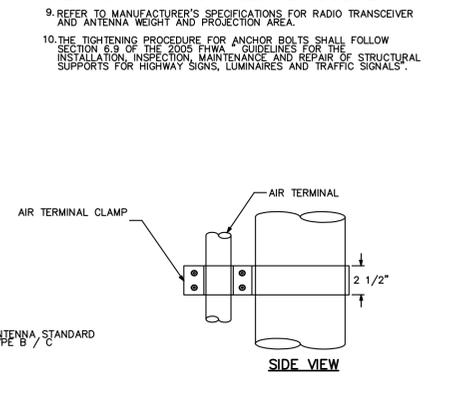
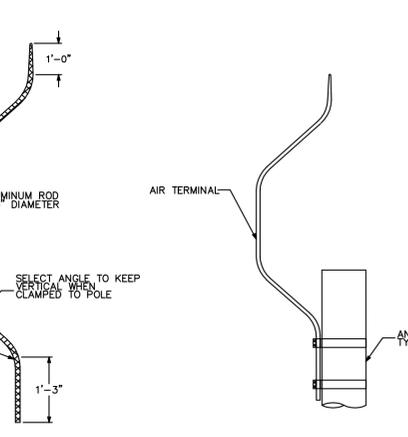
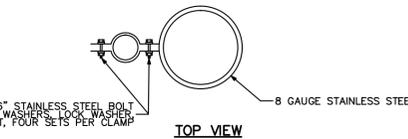
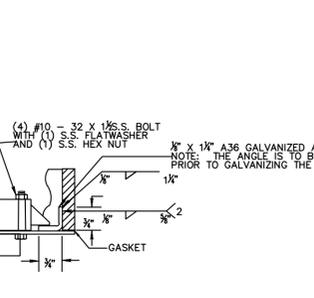
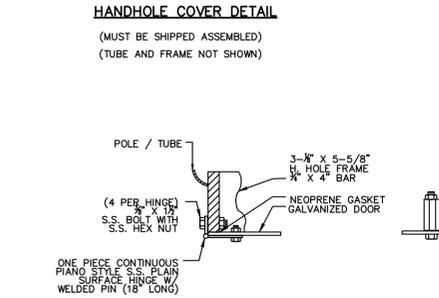
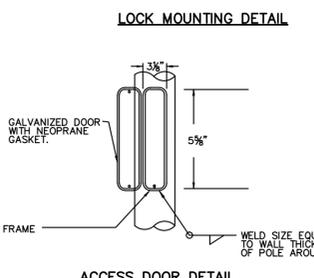
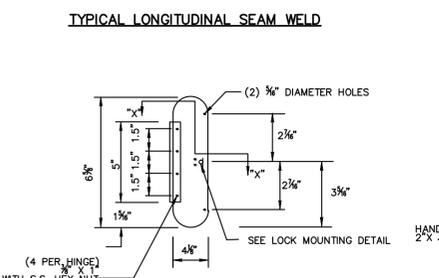
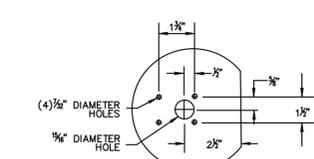
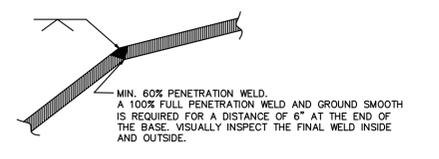
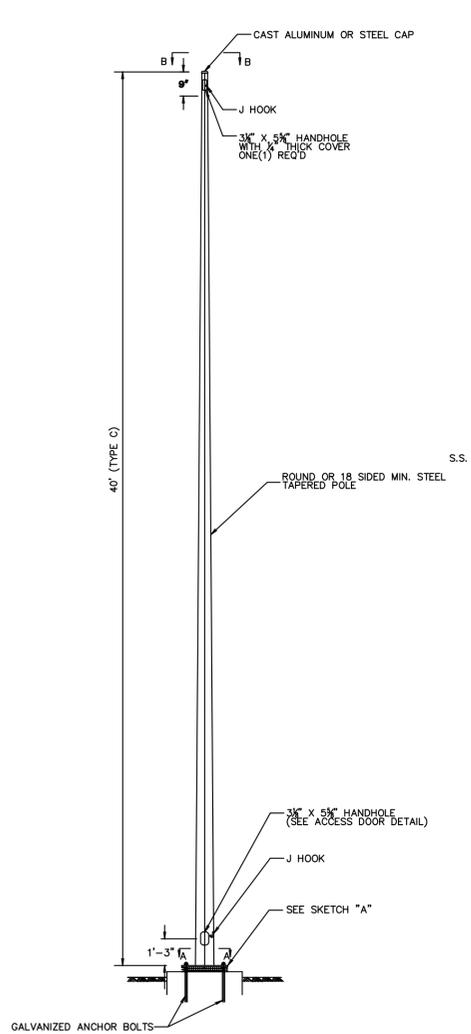
NEW JERSEY MEADOWLANDS COMMISSION

ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

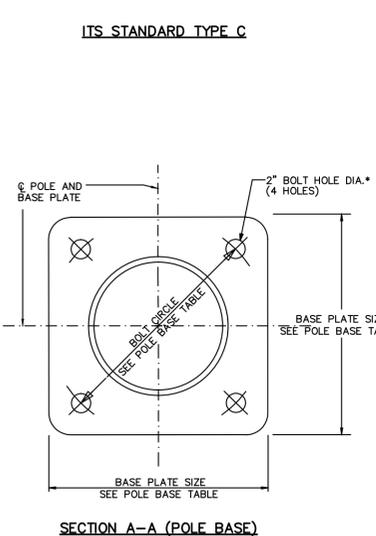
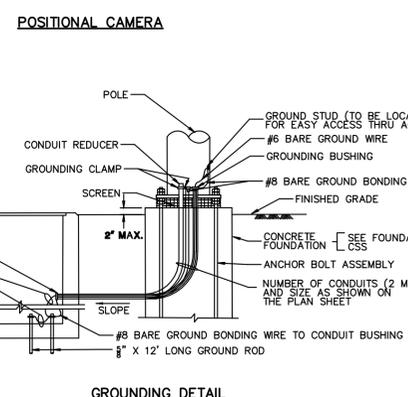
MASTR

MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

TIGER 2



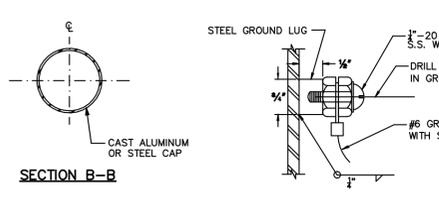
NOTES:
 1. INSTALL ALL WIRING INSIDE THE POLE AND PROVIDE STRAIN RELIEF FOR ALL ANTENNA CABLES.
 2. SUPPORT ELECTRICAL AND COMMUNICATION CABLES WITH SEPARATE GRIPS.



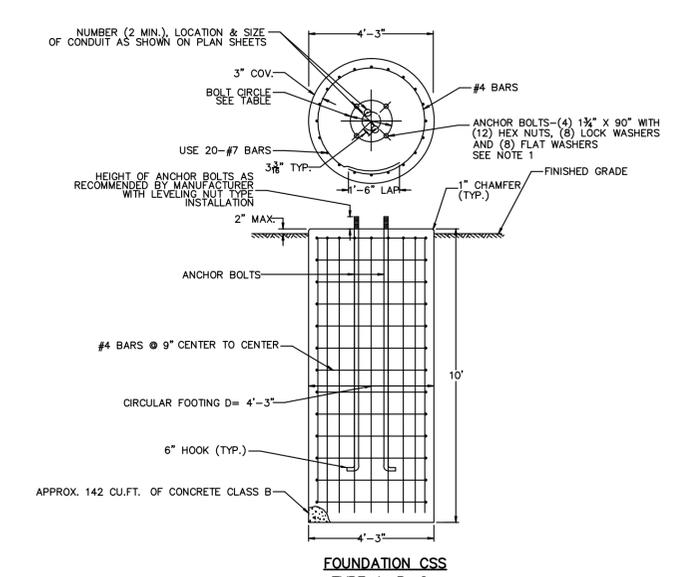
POLE BASE TABLE

POLE TYPE	POLE HEIGHT	BASE PLATE SIZE (AxB) (IN)	BOLT CIRCLE DIAMETER (IN)	BASE PLATE THICKNESS (IN)	BOLT HOLE DIAMETER (IN)
C	40'	20 X 20	20	2	2*

* FOR ANCHOR BOLD DIA. 1 3/4"



DESIGN SPECIFICATIONS:
 UTILIZE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS WITH THE LATEST INTERIM.
 DESIGN WIND VELOCITY 80 M.P.H. (APPENDIX C)
 FATIGUE CATEGORY 2 P.S.F.
 DESIGN LIFE 50 YEARS
 ENSURE ALL LOADS APPLIED TO ALL MEMBERS HAVE BEEN TAKEN INTO ACCOUNT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. WELDED STRUCTURAL DETAILS HAVE BEEN ANALYZED AGAINST FATIGUE. THE DESIGN SHOULD CONSIDER, BUT IS NOT LIMITED TO, POLE, HAND HOLE, BASE PLATE, POLE-TO-BASE CONNECTION, ANCHOR BOLTS AND EMBEDMENT.
 ENSURE MAXIMUM HORIZONTAL DEFLECTION AT THE TOP OF THE POLE COMPLETELY ASSEMBLED WITH RADIO TRANSCIEVERS, ANTENNAS, AND ALL FIXTURES ATTACHED DOES NOT EXCEED 2 INCHES FROM THE CENTER LINE DUE TO A 40 MPH (GUST FACTOR 1.3) WIND SPEED (APPENDIX C WIND PRESSURE FORMULA)
 SUBMIT DETAIL PLANS AND DESIGN CALCULATIONS OF ITS STANDARD POLES, RADIO TRANSCIEVER WEIGHT AND PROJECTION AREA, ANTENNA WEIGHT AND PROJECTION AREA, AND ANCHOR BOLT FOR APPROVAL. ENSURE THE DESIGN CALCULATIONS AND WORKING DRAWINGS ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.
MATERIALS:
 TAPER THE STEEL POLE. ENSURE THE POLE MATERIAL CONFORMS TO ASTM SPECIFICATIONS A595, GRADE A (MIN. YIELD POINT 55 KSI), AS AN ALTERNATE THE POLE (18 SIDED MIN.) MAY BE FORMED FROM STEEL CONFORMING TO ASTM SPECIFICATION A572 GRADE 55. ALL OTHER STEEL CONFORMS TO ASTM SPECIFICATION A709 (ASTM A709) GRADE 50 OR GRADE 50W. ALL STEEL PLATES REGARDLESS OF THICKNESS AND ALL OTHER STEEL PLATES GREATER THAN 2" THICKNESS SHALL MEET THE REQUIREMENTS FOR NOTCH TOUGHNESS (CHARPY TESTING ZONE 2). GALVANIZE THE ENTIRE UNIT OF THE POLE PER ASTM A123 AFTER FABRICATION.
 MANUFACTURER OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE BOLTS/ANCHOR BOLTS, NUTS AND WASHERS IN PACKAGE AND ENSURE THE CONNECTION SAFETY.
 ENSURE ANCHOR BOLT MATERIALS CONFORM TO ASTM F1554 GRADE 36 OR 55. THE ANCHOR BOLTS SHALL BE THE FULL LENGTH OF THE BOLT, AS WELL AS NUTS AND WASHERS.
 PROVIDE STAINLESS STEEL FASTENERS INCLUDING BOLTS, NUTS, WASHERS, AND FLAT WASHERS FOR NOTCH TOUGHNESS (CHARPY TESTING ZONE 2). GALVANIZE THE ENTIRE UNIT OF THE POLE PER ASTM A123 AFTER FABRICATION.
 ALL CONCRETE SHALL BE "CLASS B" AS DEFINED IN THE NJDOT STANDARD SPECIFICATIONS.
NOTES:
 1. ENSURE STEEL POLE CONSISTS OF ONE STEEL SEGMENT AND CONTAIN ONLY ONE LONGITUDINAL SEAM WELD, AND ALL LAMINATED TUBES ARE NOT PERMITTED. SEE TYPICAL LONGITUDINAL SEAM WELD DETAIL.
 2. PROVIDE NEOPRENE DOOR GASKET CEMENTED TO DOOR.
 3. INSTALL ITS STANDARD POLE AREA BEYOND THE FINISHED GRADE IN ACCORDANCE WITH THE DEPARTMENT'S POLICY.
 4. PROVIDE A GALVANIZED SCREEN, WRAPPED AROUND THE BASE OF POLE.
 5. ENSURE THE GALVANIZED SCREEN HAS NO MORE THAN 1/4" OPENINGS AND IS HELD TOGETHER WITH STAINLESS STEEL NUTS, BOLTS AND FLAT WASHERS.
 6. DO NOT GROUT UNDER THE POLE.
 7. PROVIDE ONE (1) LEVELING HEX NUT, TWO (2) HOLD DOWN HEX NUTS AND TWO (2) FLAT WASHER PER ANCHOR BOLT (SEE SKETCH A) DETERMINE THE PROPER LENGTH OF THE ANCHOR BOLT FOR PROJECTION AND EMBEDMENT. THE CLEARANCE BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHALL NOT EXCEED 1/2". THE PROJECTION LENGTH SHALL BE A MINIMUM OF 9".
 8. ENSURE WELDING CONFORMS TO THE AWS D1.1 WELDING CODE. ALL WELDING SHALL BE DONE IN PROTECTION OF WELDING MASKS AND GLOVES. ALL WELDING SHALL BE DONE IN PROTECTION OF WELDING MASKS AND GLOVES. TESTING CONFORM TO AWS D1.1, UNLESS OTHERWISE SPECIFIED.
 9. REFER TO MANUFACTURER'S SPECIFICATIONS FOR RADIO TRANSCIEVER AND ANTENNA WEIGHT AND PROJECTION AREA.
 10. THE TIGHTENING PROCEDURE FOR ANCHOR BOLTS SHALL FOLLOW SECTION 6.9 OF THE 2005 FHWA "GUIDELINES FOR THE INSTALLATION, INSPECTION, MAINTENANCE AND REPAIR OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."



"BOLT CIRCLE TABLE"

FOUNDATION TYPE	POLE HEIGHT	ANCHOR BOLT CIRCLE DIAMETER	ANCHOR BOLT SPECIFICATION
C	40'	20"	ASTM F1554 GRADE 36 OR 55
B	55'	24"	ASTM F1554 GRADE 36 OR 55
A	75'	30"	ASTM F1554 GRADE 36 OR 55

GENERAL DESIGN SPECIFICATIONS:
 CONCRETE DESIGN STRESS:
 SPECIFIED COMPRESSIVE STRENGTH (f'c) (CLASS B).....3,000 PSI
 EXTREME FIBER COMPRESSIVE STRESS (fc).....1,200 PSI
 REINFORCEMENT STEEL DESIGN STRESS:
 YIELD STRENGTH (fy) (A615, GRADE 60).....60 KSI
 TENSILE STRENGTH (ts).....90 KSI

NOTES:
 1. IF EXISTING SOIL APPEARS TO BE UNSUITABLE (SOFT, WET, COMPRESSIBLE, MUCK, ETC.) AND MAY NOT SUSTAIN CONSTRUCTION EQUIPMENT, NJDOT GEOTECHNICAL ENGINEERING UNIT, 608-530-3750, SHOULD BE CONTACTED.
 2. HOT DIP GALVANIZE ANCHOR BOLTS PER ASTM A153 FOR THE FULL LENGTH OF THE BOLT AFTER THREADING.
 3. MANUFACTURER IS TO PROVIDE ANCHOR BOLTS. ANCHOR BOLTS EMBEDMENT LENGTH, THREADED LENGTH AND PROJECTION LENGTH IS TO BE DETERMINED BY THE MANUFACTURER.
 4. LUBRICATE ANCHOR BOLT PROJECTION PORTION BEFORE MOUNTING THE POLE.
 5. FOR ANCHOR BOLT TIGHTENING PROCEDURE SEE NOTE 11 ON SHEET 25 OF 29 (ITS STANDARD TYPE A&B), AND NOTE 10 ON SHEET 28 OF 28 (ITS STANDARD TYPE C).

REVISIONS:

NO.	DESCRIPTION	DATE

DRAWN BY: LA
 CHECKED BY: HY
 APPROVED BY: DL
 DATE: 7/25/14

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

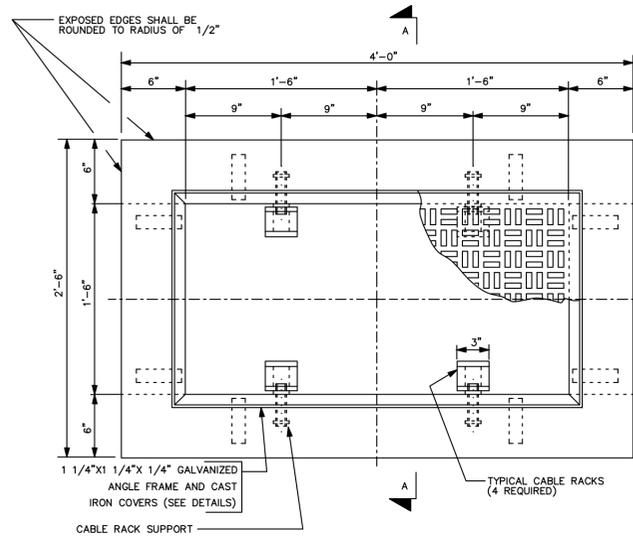
MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

NEW JERSEY MEADOWLANDS COMMISSION
 TIGER 2

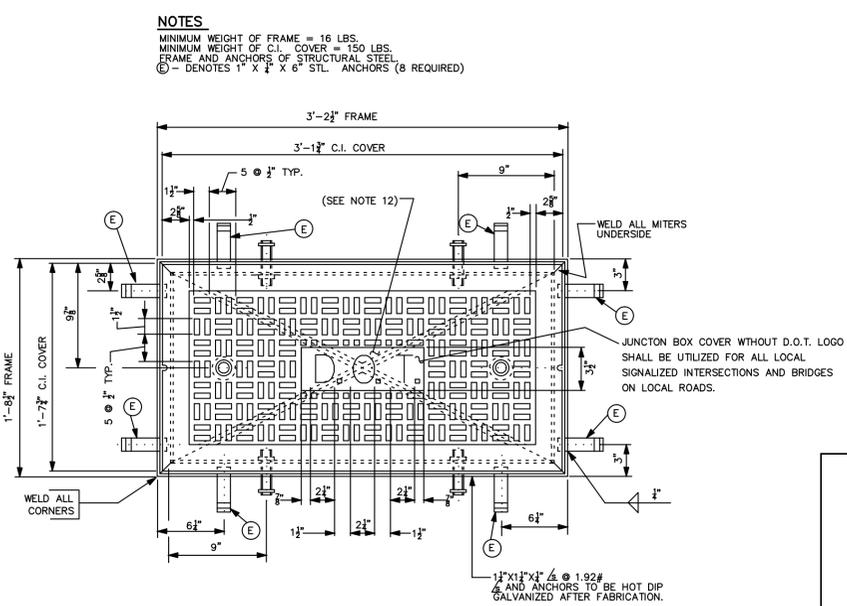
DAVID LIEBGOLD
 PROFESSIONAL ENGINEER N.J. LIC. GE46897

HONG YUAN
 PROFESSIONAL ENGINEER N.J. LIC. GE48491

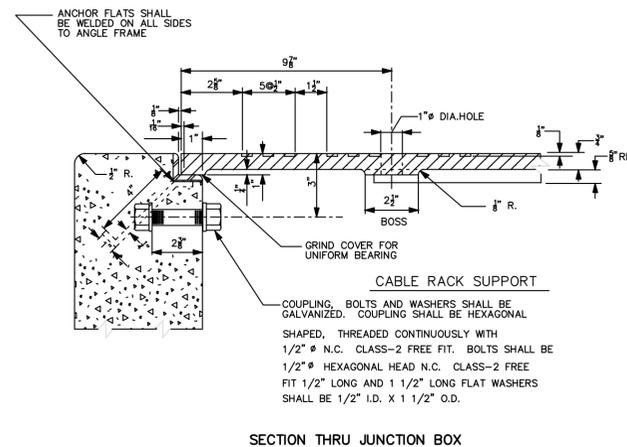
LEOMAR ALMANZAR
 PROFESSIONAL ENGINEER N.J. LIC. GE48348



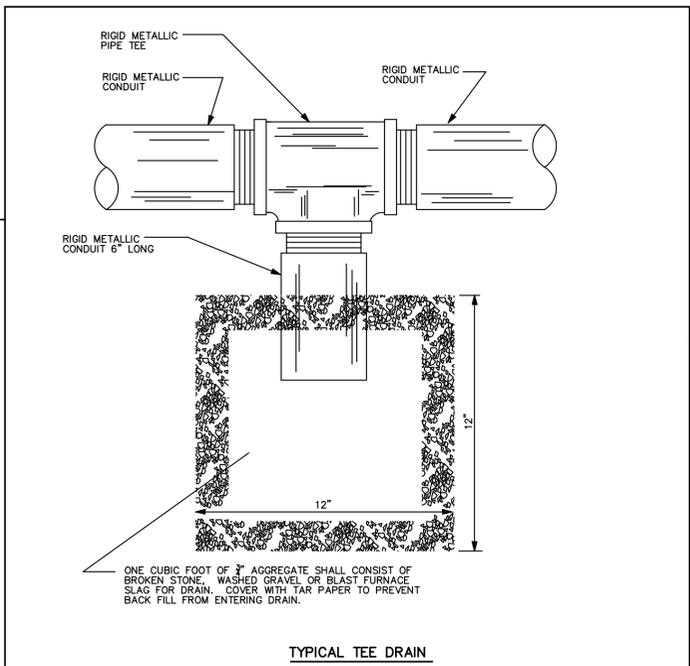
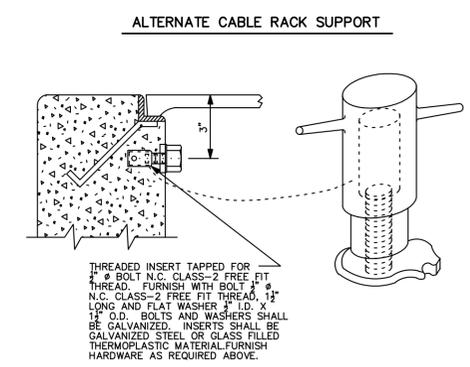
PLAN
18' X 36' JUNCTION BOX - CLASS "JB"
 CONCRETE CLASS "C"
 USING APPROVED 5/8" AGGREGATE
 0.8 CU. YD.



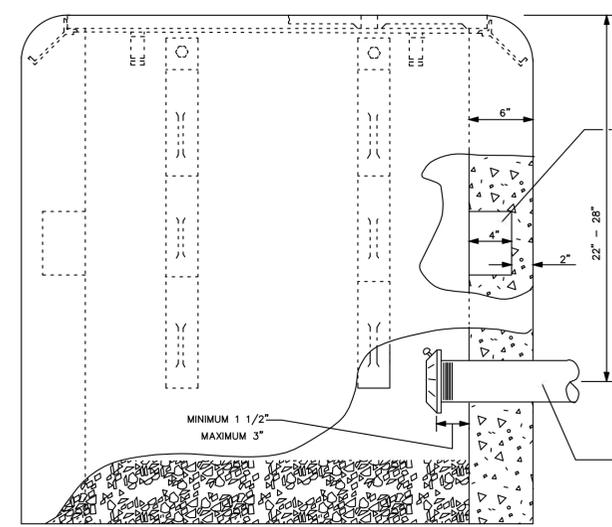
COVER & FRAME



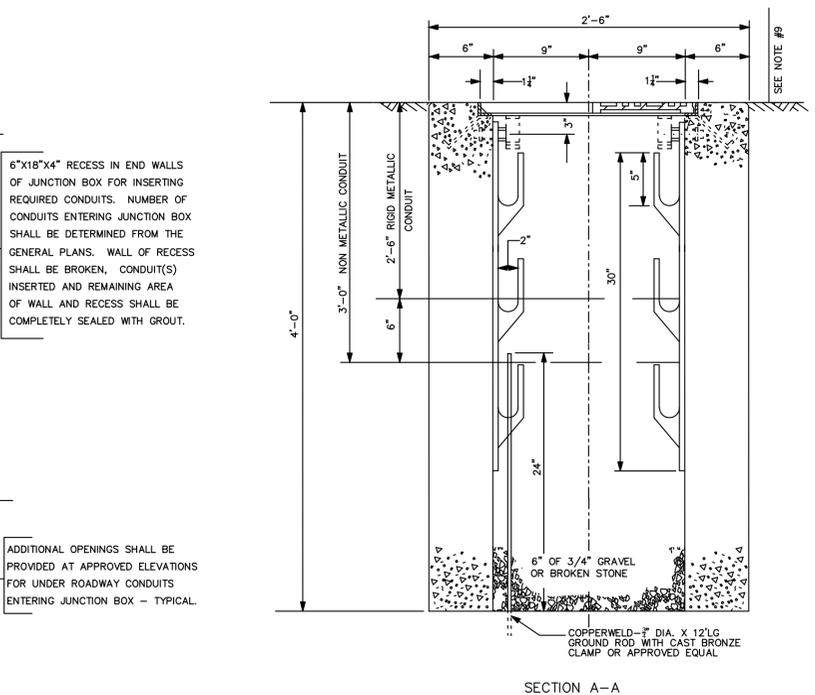
SECTION THRU JUNCTION BOX



TYPICAL TEE DRAIN

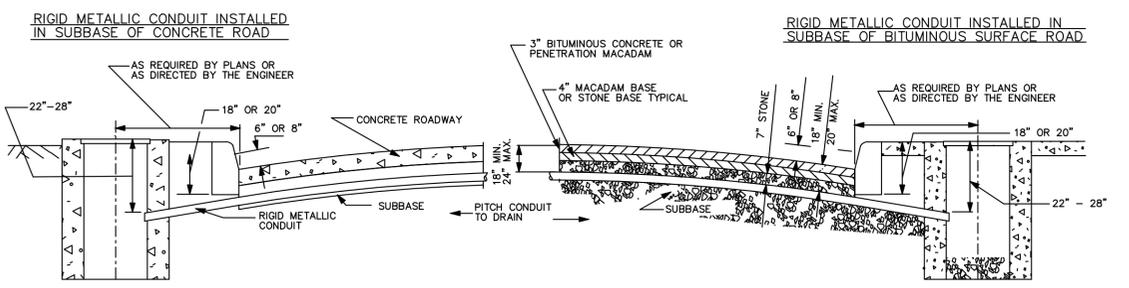


ELEVATION

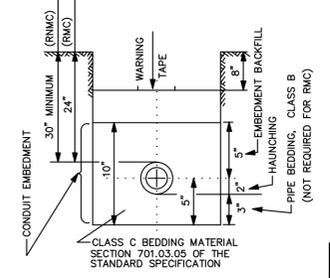
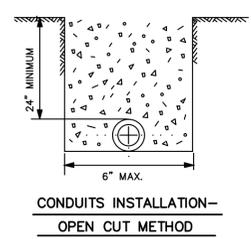


SECTION A-A

- NOTES:
- JUNCTION BOX FOUNDATION SHALL BE SET PARALLEL TO THE CURB AND TOP OF JUNCTION BOX SHALL BE SET AT GRADE IN SIDEWALK, PAVED AREA, IN GRASS OR DIRT AREAS.
 - CABLE RACKS FURNISHED AND INSTALLED AS INDICATED.
 - BONDING AND GROUNDING INSULATED BUSHINGS SHALL BE INSTALLED ON METALLIC CONDUITS TERMINATING IN JUNCTION BOXES AND/OR FOUNDATIONS AND SHALL HAVE A FITTING TO PREVENT ENTRY OF FOREIGN MATTER PRIOR TO INSTALLATION OF WIRING.
 - A NYLON CORD, 125 POUND MINIMUM TEST STRENGTH, SHALL BE FURNISHED AND INSTALLED IN ALL CONDUITS. SEE SPECIFICATIONS.
 - CONDUITS SHALL ENTER JUNCTION BOX PERPENDICULAR TO WALLS OR AS APPROVED BY THE ENGINEER. A 2" SEPARATION SHALL BE MAINTAINED BETWEEN ADJACENT WALLS, CONDUITS, AND CABLE RACK LOCATIONS.
 - TERMINAL ENDS OF ALL METALLIC CONDUIT SHALL BE THREADED.
 - ALL NON-METALLIC CONDUITS SHALL TERMINATE WITH BELL END CONSTRUCTION IN JUNCTION BOX.
 - ALL UNUSED CONDUITS SHALL BE PLUGGED OR CAPPED.
 - ENGINEER MAY REQUIRE TOP OF JUNCTION BOX TO BE INCLINED IN ORDER TO CONFORM WITH FIELD CONDITIONS. JUNCTION BOX SHALL BE SET TO GRADE IN SIDEWALK AREA AND IN ALL OTHER AREAS.
 - WARNING TAPE SHALL BE A RED 4 MIL. FLEXIBLE POLYETHYLENE FILM WHICH IS RESISTANT TO ACIDS, BASES, HYDROCARBONS AND WATER.
 - IN INCLINE AREA, NO PART OF THE JUNCTION BOX SHALL EXTEND MORE THAN 4" ABOVE THE FINISH GRADE.
 - JUNCTION BOX COVER WITHOUT D.O.T. LOGO SHALL BE UTILIZED FOR ALL LOCAL SIGNALIZED INTERSECTIONS AND BRIDGES ON LOCAL ROADS.



TYPICAL INSTALLATION OF UNDER ROADWAY RIGID METALLIC CONDUITS AND TYPICAL JUNCTION BOXES (18' X 36") INSTALLATION SUBJECT TO APPROVAL OF THE ENGINEER



REVISIONS:

NO.	DESCRIPTION	DATE

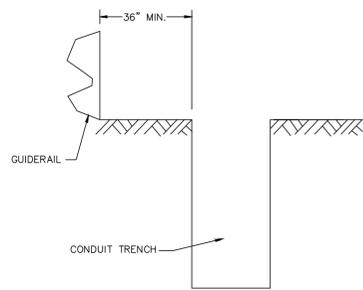
DRAWN BY: LA APPROVED BY: DL

CHECKED BY: HY DATE: 7/25/14

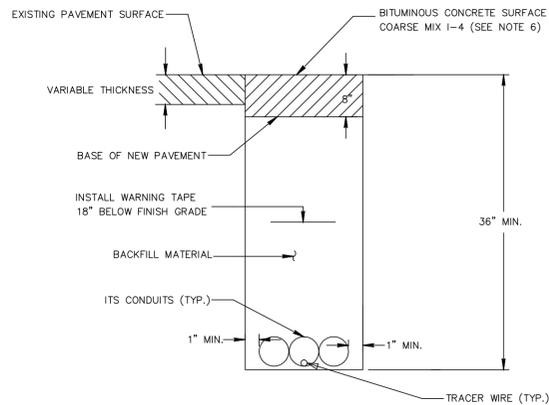
NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

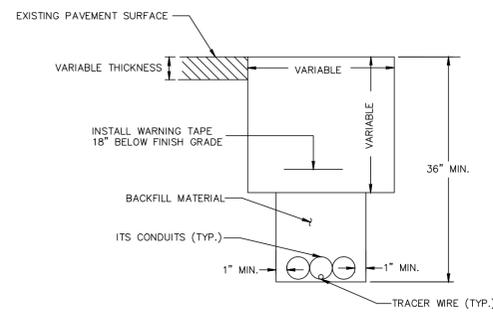
DAVID LIEBGOLD <i>David Liebgold</i> PROFESSIONAL ENGINEER N.J. LIC. GE45897	HONG YUAN <i>Hong Yuan</i> PROFESSIONAL ENGINEER N.J. LIC. GE48491	LEOMAR ALMANZAR <i>Leomar Almanzar</i> PROFESSIONAL ENGINEER N.J. LIC. GE48348	CONSTRUCTION DETAILS -4-
SCALE: N.T.S.	NJMC PROJECT: PHASE 5	SHEET #: 58 OF 66	



CONDUIT TRENCH OFFSET FROM EXISTING AND PROPOSED GUIDERAIL



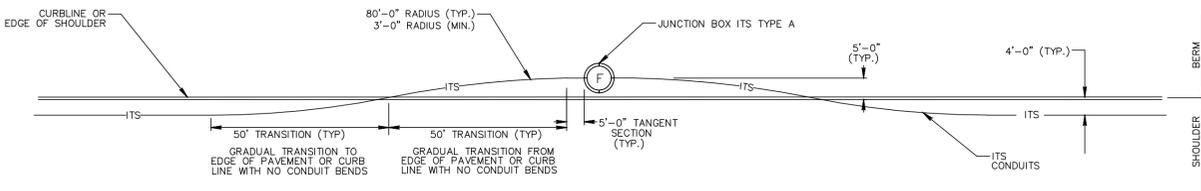
IN BITUMINOUS SHOULDER, TRAVELED WAY OR RAMP AREA



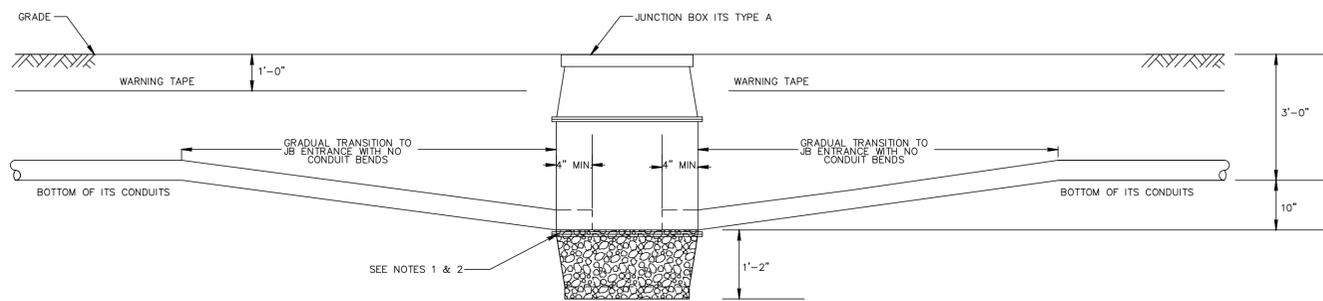
IN REHABILITATED/RECONSTRUCTED CONCRETE SHOULDER OR BITUMINOUS SHOULDER, TRAVELED WAY OR RAMP AREA

NOTES:

1. THE GRADUAL TRANSITION OF CONDUITS ENTERING THE JUNCTION BOX IS TO BE SUCH THAT THE CONDUIT ENDS REST ON THE STONES INSIDE THE JUNCTION BOX.
2. THE TRANSITION MUST PROVIDE FOR SUFFICIENT DRAINAGE TO ENSURE THAT WATER DOES NOT GET TRAPPED IN THE CONDUITS.
3. BACKFILL THE TRENCH WITHIN THE SAME DAY.
4. TRANSITION LAYOUT FOR ITS CONDUITS LEADING TO JUNCTION BOXES ITS TYPE C AND D IS TO BE SIMILAR.

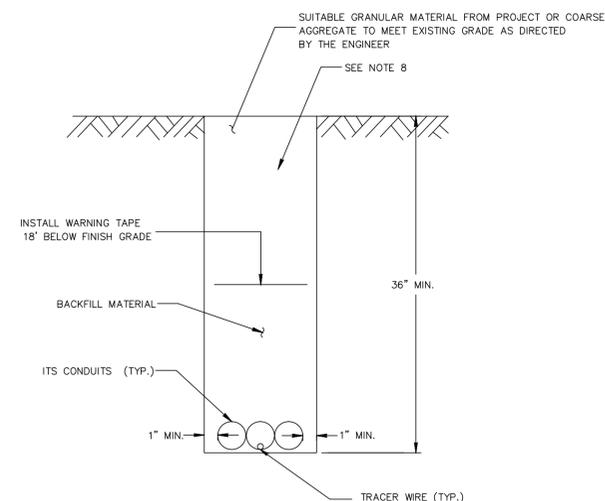


TYPICAL ITS CONDUIT HORIZONTAL TRANSITION

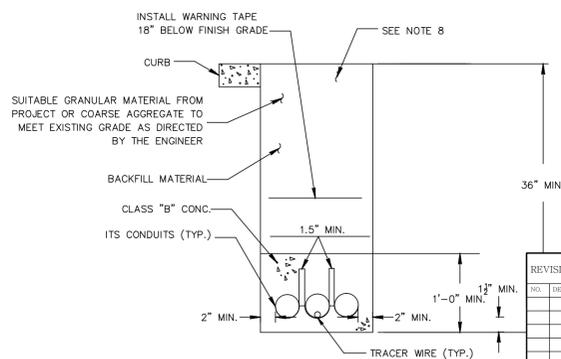


TYPICAL ITS CONDUIT VERTICAL TRANSITION

TYPICAL UNDERGROUND ITS CONDUIT TRANSITION AND LAYOUT



IN GRASS AREA



ITS CONDUIT, TYPE A

NOTES:

1. BEFORE BACKFILLING TRENCH, REMOVE ALL CUT DEBRIS FROM SITE.
2. PREPARE THE TRENCH BOTTOM FOR ITS CONDUITS TO ELIMINATE LUMPS, RIDGES, JAGGED EDGES AND HOLLOW, UTILIZING CLASS C BEDDING MATERIALS.
3. CENTER THE ITS CONDUITS IN THE TRENCH AND HOLD FIRMLY IN PLACE WHILE THE TRENCH IS BACKFILLED.
4. ENSURE THE BACKFILL MATERIAL IS CLASS C BEDDING 2' ABOVE THE TOP OF CONDUIT OR TO THE BOTTOM OF THE PAVEMENT BOX.
5. COMPACT THE BACKFILL MATERIAL IN EQUAL LIFTS TO A MAXIMUM OF 6" EACH WITH A MODIFIED VIBRATORY PLATE COMPACTOR. (MINIMUM THREE PASSES PER LIFT)
6. MOUND UP THE BITUMINOUS CONCRETE SURFACE COARSE MIX 1-4 ABOVE THE EXISTING PAVEMENT SURFACE. AFTER THOROUGH COMPACTION ENSURE FINISH GRADE IS 1/4" ABOVE THE ADJACENT PAVEMENT SURFACE. COMPACT IN ACCORDANCE WITH SECTION 1003 (10 TON VIBRATORY ROLLER).
7. FOR WARNING TAPE DETAILS SEE FIBER OPTIC WARNING TAPE, MARKER & TAG DETAIL.
8. AFTER MATERIAL IS BACKFILLED, SEED AND MULCH IN ACCORDANCE WITH DIVISION 800.
9. WHEN THERE IS A CONCRETE SHOULDER, SAW CUT AND REMOVE THE CONCRETE MATERIAL BACK TO THE CURB, UTILIZING A TRENCHING MACHINE TO MAKE THE TRENCH. ENSURE REPLACEMENT MATERIAL COMPLIES WITH NOTE 11.
10. WHEN THERE IS A CONCRETE SHOULDER WITH BITUMINOUS OVERLAY, REPLACE WITH 8" MINIMUM BITUMINOUS MATERIAL OR MATCH EXISTING SECTION. (SEE NOTE 6)
11. ENSURE QUICK SETTING CONCRETE IS TYPE 1A AND COMPLIES WITH SECTION 903.07. FOR CONCRETE REPLACEMENT ENSURE THE THICKNESS OF THE QUICK SETTING CONCRETE IS THE SAME AS THE EXISTING. REPLACE EXPANSION JOINTS AND DOWELS IN KIND AND INSTALL LONGITUDINAL JOINT TIES IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DETAILS. CONTRACTOR IS TO SUPPLY THE ENGINEER WITH DETAILED DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
12. INSTALL ONE #14 AWG CONDUCTOR TYPE THHW/THWN IN THE MIDDLE CONDUIT PER TRENCH.
13. UNLESS OTHERWISE SPECIFIED, EACH ITS CONDUIT IS 2" IN DIAMETER (I.D.) MEETING ALL CONDUIT REQUIREMENTS FOR FNMC (HDPE).
14. PRIOR TO TERMINATION, ENSURE THE ITS CONDUITS NORMALIZES A MINIMUM OF 24 HOURS. ENSURE CONDUIT SLACK AND TERMINATIONS INSIDE THE JUNCTION BOX ARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION FOR DISTANCES BETWEEN JUNCTION BOXES AND THE PROPER TEMPERATURE VARIATION TO ENSURE THE PROPER SLACK AND TERMINATION.
15. ENSURE THAT ONE OF ITS CONDUITS IS RED IN COLOR AND IS INSTALLED ON EITHER THE LEFT OR RIGHT SIDE OF THE TRENCH. THE REMAINING TWO ITS CONDUITS ARE TO BE ORANGE IN COLOR.

REVISIONS:		
NO.	DESCRIPTION	DATE

DRAWN BY: **DAVID LIEBGOLD**
 CHECKED BY: **LA**
 APPROVED BY: **HONG YUAN**
 DATE: **7/25/14**

NEW JERSEY MEADOWLANDS COMMISSION
 ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434

MASSTR
 MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION

TIGER 2

DAVID LIEBGOLD
 PROFESSIONAL ENGINEER N.J. LIC. GE45897

HONG YUAN
 PROFESSIONAL ENGINEER N.J. LIC. GE48481

LEOMAR ALMANZAR
 PROFESSIONAL ENGINEER N.J. LIC. GE48348

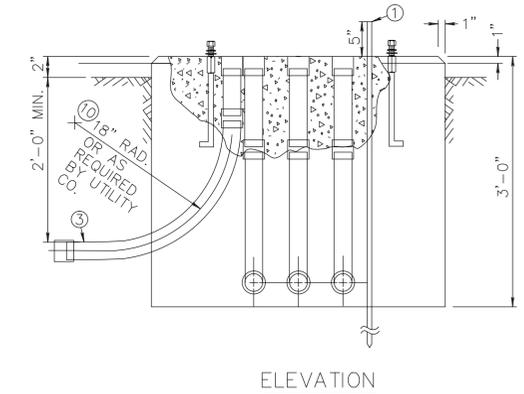
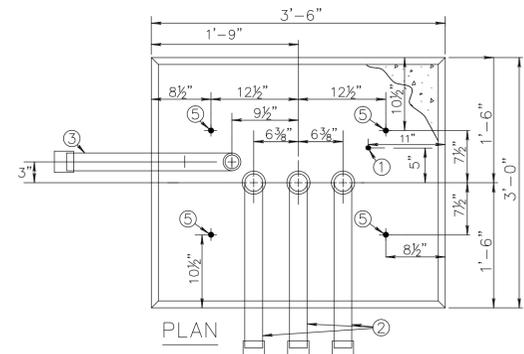
SCALE: **N.T.S.** NJMC PROJECT: **PHASE 5** SHEET #: **61 OF 66**

ITEM DESCRIPTION

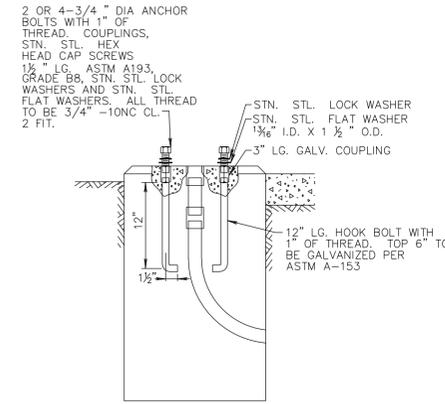
- ① 5/8" DIA. X 12 FT. LONG GROUND ROD.
- ② 3" DIA. RMC TERMINATED INTO JUNCTION BOX.
- ③ RMC (SERVICE CONDUIT). SEE GENERAL CONSTRUCTION PLANS FOR DIRECTION AND SIZE. IF NOT SPECIFIED, INSTALL 2" DIA. RMC.
- ④ 2" DIA. RIGID METALLIC CONDUIT. (SERVICE CONDUIT)
- ⑤ ANCHOR BOLT (TYP. SEE "ANCHOR BOLT DETAIL").
- ⑥ DRAIN - 1" DIA. RIGID METALLIC CONDUIT. (PITCH DOWN TO JUNCTION BOX.)
- ⑦ 2" X 2" X 1" GALVANIZED TEE FITTING FOR DRAIN.
- ⑧ RMC (INTERCONNECT CONDUIT). SEE GENERAL PLAN FOR DIRECTION AND SIZE. IF NOT SPECIFIED INSTALL 2" DIA. RMC.
- ⑨ 2" DIA RMC (INTERCONNECT CONDUIT)
- ⑩ RADIUS - SUBJECT TO APPROVAL OF UTILITY COMPANY.

NOTES:

- 1. ALL CONDUITS WITH COUPLINGS ARE TO BE EMBEDDED, PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.
- 2. INSERT J-BOLT 1 1/2" +/- 1/16" INTO 3" COUPLING
- 3. POUR MONOLITHIC FOUNDATIONS.
- 4. ALL CONCRETE TO BE CLASS "B".
- 5. PLUG/CAP ALL CONDUIT ENDS.
- 6. FOUNDATION AS REQUIRED BY THE UTILITY COMPANY.



FOUNDATION ITS TYPE "A" - MODIFIED



TYP. ANCHOR BOLT DETAIL

GENERAL DESIGN SPECIFICATIONS:

CONCRETE DESIGN STRESS:

SPECIFIED COMPRESSIVE STRENGTH (f'c) (CLASS B).....3,000 PSI
 EXTREME FIBER COMPRESSIVE STRESS (f'c).....1,200 PSI

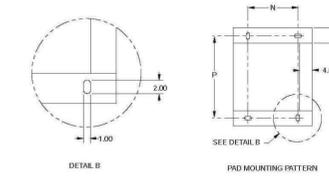
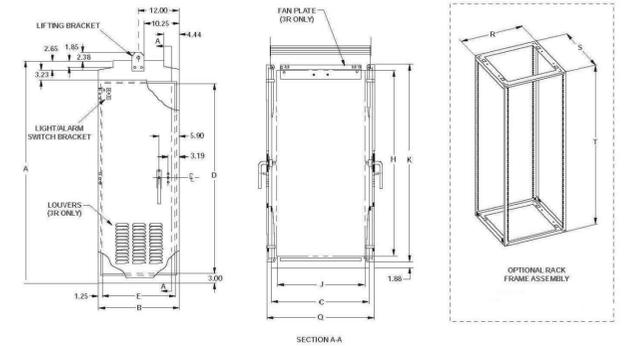
REINFORCEMENT STEEL DESIGN STRESS:

YIELD STRENGTH (fy) (ASTM A616, GRADE 60).....60 KSI
 TENSILE STRENGTH (ts).....24 KSI

NOTES:

- 1. 3/4" DIA. X 12 FT. LONG GROUND ROD. PROVIDE GROUNDING AND BONDING AS PER NEC. REQUIREMENTS.
- 2. FOR NUMBER AND SIZE OF CONDUITS, SEE ITS PLANS.
- 3. COORDINATE THE LOCATION OF ANCHOR BOLTS WITH THE MOUNTING HOLES OF THE CABINET SUPPLIED.
- 4. PROVIDE CONCRETE PAD ON THE FRONT AND BACK OF CABINET FOUNDATION.
- 5. PAYMENT FOR CONCRETE PAD TO BE INCLUDED UNDER PAY ITEM, FOUNDATION ITS, TYPE A.

NOT TO SCALE



- Included Options**
- Rack Frame Assembly
 - Climate Control
 - Air Conditioner
 - Sunshields
 - Insulation
 - Heater
 - Forced Air Ventilation-Fan (3R only)
 - 60 Amp Circuit Panel
 - 6 GFI Electrical Outlet Panel

SUGGESTED MOUNTING OPTIONS		CABINET					DOOR OPENING					SWITCH COMPARTMENT LOCATION					AVAILABLE WORK SPACE					PANEL					PAD MTC. PATTERN					GENERAL INFORMATION																					
PED	POLE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ		
NO	NO	YES	67.00	24.00	30.00	57.00	21.50	OPTIONAL	53.75	26.25	59.25	N/A	N/A	N/A	15.00	25.00	32.50	20.00	20.75	55.25																																	

INDUSTRY STANDARD:
 U.L. Type 3R, 4X

A. ENCLOSURE:

- 1. The complete enclosure is made from .125" thick aluminum alloy type 5052-H-32 to provide a strong and rigid construction. Alternative material is 14 gauge type 304 stainless steel.
- 2. The door frame opening is double flanged on all four sides. These flanges increase the strength of the door opening and help prevent dust and liquids from dropping into the enclosure when the door is opened.
- 3. All exterior seams are ground smooth or sealed weathertight with silicone sealant.
- 4. All hardware is either stainless steel or aluminum.
- 5. (3R only) Enclosures have provisions for mounting a forced air fan system that can be thermostatically controlled, and air is exhausted through a screened vent system in the enclosure top.

B. DOOR: (Front-hinge on __, rear-hinge on __)

- 1. Equipped with three point latching mechanism with nylon rollers at the top and bottom.
- 2. Door handle is .75" stainless steel round bar and has provisions for a padlock.
- 3. (3R only) The standard main door lock is Corbin #1548 -1 or equal.
- 4. (3R only) A louvered air vent with reusable metal filter and retaining brackets is provided.
- 5. The main door is sealed with closed-cell neoprene gasket.
- 6. The continuous door hinge is .075" thick stainless steel with a .25" stainless hinge pin.

C. FINISH:

- 1. Natural aluminum enclosures are mill finish per federal specification QQ-A-250/8.
- 2. Painted enclosures are treated with an iron phosphate coating and dried by radiant heat. The standard finish coat is baked polyester powder.

FIBER OPTIC CABINET, SINGLE DOOR-DOUBLE SIDED

<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>NO</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>				NO	DESCRIPTION	DATE																															<p>NEW JERSEY MEADOWLANDS COMMISSION ONE DEKORTE PARK PLAZA LYNDHURST NJ 07071 - PHONE (201) 460-1700 - FAX (201) 460-8434</p> <p>MASSIR MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION</p>			
NO	DESCRIPTION	DATE																																						
DRAWN BY: DN CHECKED BY: HY		APPROVED BY: DL DATE: 7/25/14		DAVID LIEBGOLD PROFESSIONAL ENGINEER N.J. LIC. GE48897		HONG YUAN PROFESSIONAL ENGINEER N.J. LIC. GE48481		LEOMAR ALMANZAR PROFESSIONAL ENGINEER N.J. LIC. GE48348		ITS DETAILS -5-																														
SCALE: N.T.S.		N/JMC PROJECT: PHASE 5		SHEET #: 65 OF 66																																				

