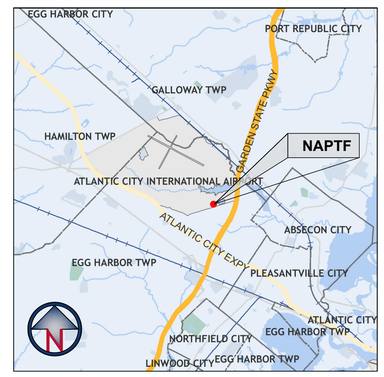
REFLECTIVE CRACKING PHASE II

AS-BUILT DRAWINGS

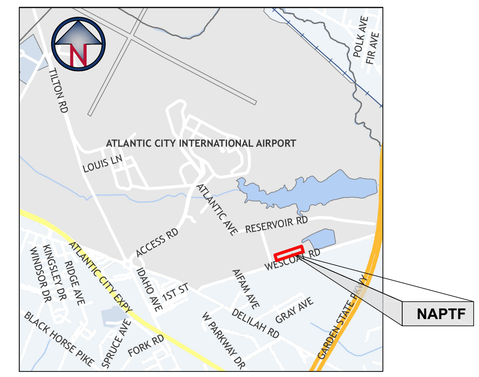
NATIONAL AIRPORT PAVEMENT TESTING FACILITY
WILLIAM J. HUGHES TECHNICAL CENTER
ATLANTIC CITY AIRPORT, NEW JERSEY

NEW JERSEY STATE MAP N.T.S.

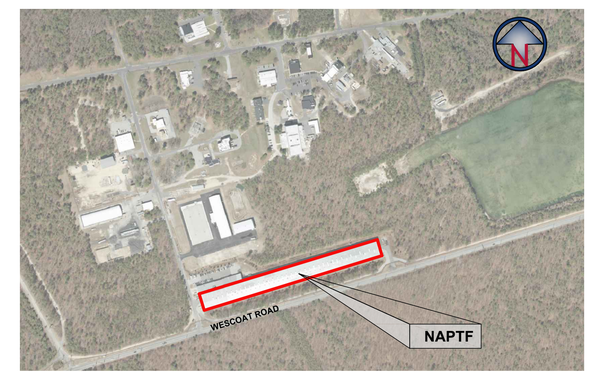
VICINITY MAP N.T.S.



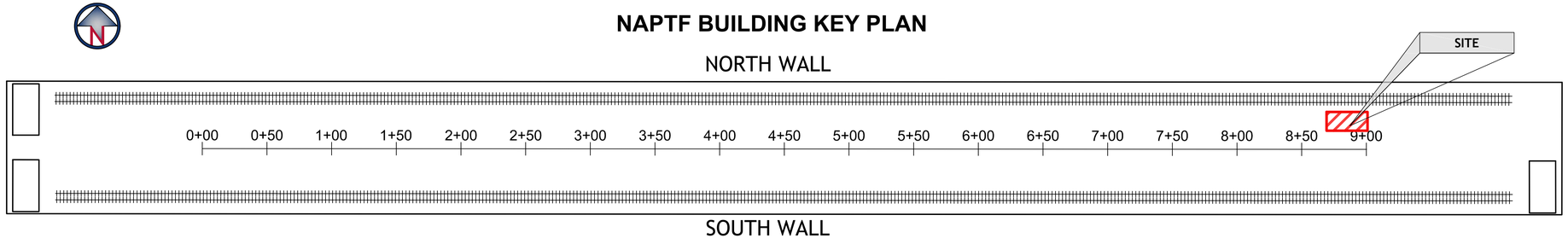
PROJECT LOCATION MAP N.T.S.



AERIAL VIEW OF THE NAPTF BUILDING N.T.S.



NAPTF BUILDING KEY PLAN

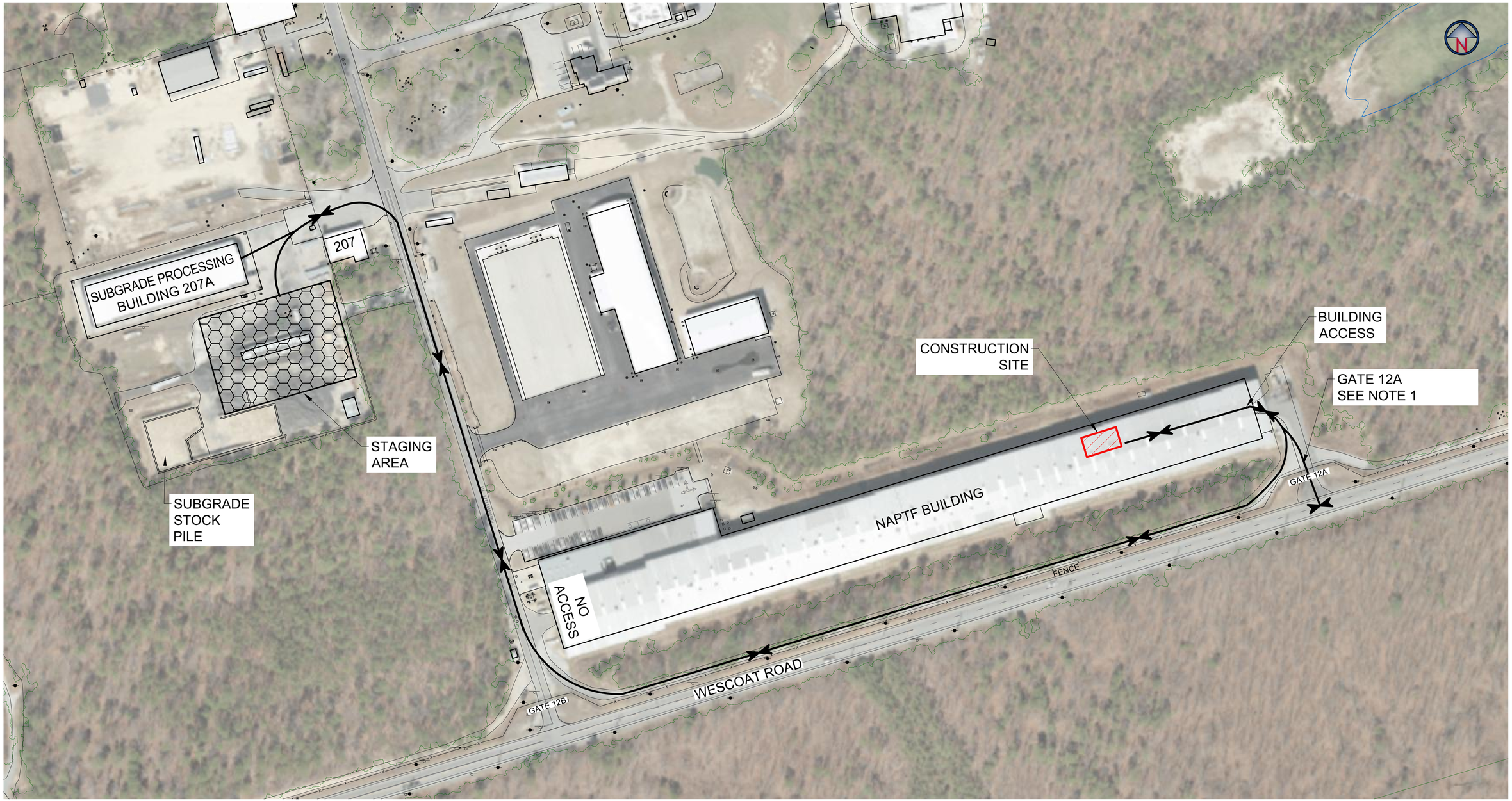


INDEX OF DRAWINGS

SHEET #	SHEET TITLE	LAST REVISED
1 OF 7	COVER SHEET	02/15/2017
2 OF 7	SITE ACCESS, HAULING AND STAGING AREA PLAN	02/10/2017
3 OF 7	NAPFT BUILDING ACCESS AND CONTROL NETWORK PLAN	02/10/2017
4 OF 7	EXISTING CONDITIONS PLAN	02/10/2017
5 OF 7	CONSTRUCTION PLAN	02/10/2017
6 OF 7	INSTRUMENTATION PLAN	02/15/2017
7 OF 7	INSTRUMENTATION PLAN SIDE VIEWS	02/15/2017

PREPARED BY:

SRA INTERNATIONAL, A CSRA COMPANY
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800



80' 0 80' 160' 240'

GRAPHIC SCALE

1" = 80'

NOTES:

1. CONTRACTORS ACCESS THROUGH THE GATE AVAILABLE BY ADVANCED REQUEST.
2. LOCATION OF THE STAGING AREA SHOWN IS APPROXIMATE. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.
3. SEE SHEET NUMBER 3 FOR INSIDE THE BUILDING STAGING AREA LOCATION AND RESTRICTIONS.

LEGEND:

- X — FENCE
- HAUL ROUTE
- CONSTRUCTION SITE
- STAGING AREA

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

	NAME	DATE
DRAWN	M.MAZUREK	02/10/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

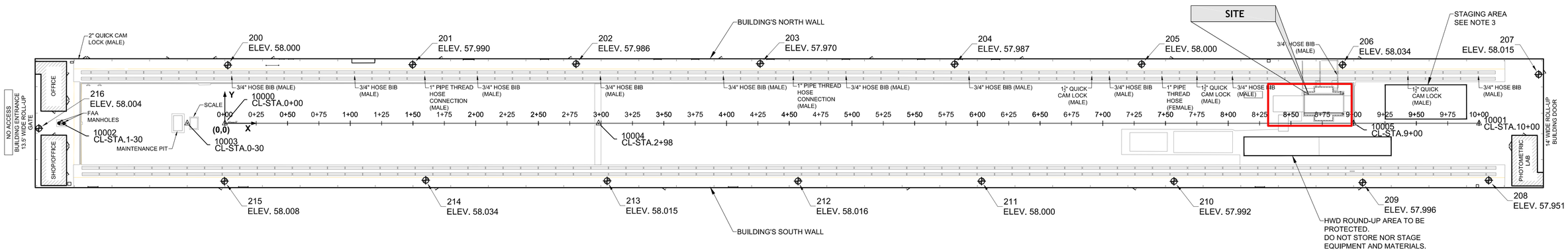
REFLECTIVE CRACKING PHASE II

SITE ACCESS, HAULING AND STAGING AREA PLAN

PROJECT NO:

SIZE: ANSI D | SCALE: AS NOTED | SHEET 2 OF 7

CAD FILE: REFL-CRACK-PHA2-GNRL.DWG



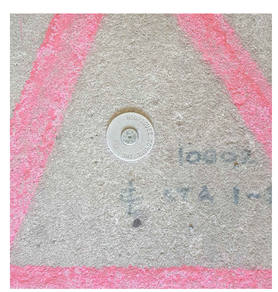
NAPTF BUILDING PLAN VIEW

SCALE: 1"=40'

CENTER LINE MARKER POINTS

NUMBER	X COORDINATE [FEET]	Y COORDINATE [FEET]	LOCATION DESCRIPTION	MARKER DESCRIPTION
10000	0.000	0.0000	ON CENTER LINE STA. 0+00	MAG AND WASHER
10001	1,000.000	0.000	ON CENTER LINE STA. 10+00	MAG AND WASHER
10002	-130.000	0.000	ON CENTER LINE STA. -1-30	MAG AND WASHER
10003	-30.000	0.000	ON CENTER LINE STA. 0-30	MAG AND WASHER
10004	298.000	0.000	ON CENTER LINE STA. 2+98	MAG AND WASHER
10005	900.000	0.000	ON CENTER LINE STA. 9+00	MAG AND WASHER

CENTER LINE MARKER DETAIL



CONTROL POINTS

NUMBER	X COORDINATE [FEET]	Y COORDINATE [FEET]	Z ELEVATION [FEET]	DESCRIPTION
200	2.352	46.209	58.000	MAG AND WASHER
201	149.673	46.634	57.990	MAG AND WASHER
202	280.029	47.236	57.986	MAG AND WASHER
203	426.822	47.441	57.970	MAG AND WASHER
204	581.880	47.034	57.987	MAG AND WASHER
205	730.901	47.054	58.000	MAG AND WASHER
206	891.088	46.481	58.034	MAG AND WASHER
207	1047.423	38.858	58.015	MAG AND WASHER
208	1007.640	-45.426	57.951	MAG AND WASHER
209	907.144	-47.198	57.996	MAG AND WASHER
210	756.728	-46.194	57.992	MAG AND WASHER
211	603.298	-46.091	58.000	MAG AND WASHER
212	456.998	-45.992	58.016	MAG AND WASHER
213	304.791	-45.889	58.015	MAG AND WASHER
214	160.140	-45.350	58.034	MAG AND WASHER
215	-0.315	-46.085	58.008	MAG AND WASHER
216	-148.287	-4.082	58.004	MAG AND WASHER

CONTROL POINT MARKER DETAIL

EACH CONTROL POINT LOCATION IS MARKED WITH A MAGNETIC NAIL WITH WASHER. THE CONTROL POINT NUMBER IS ENGRAVED ON EACH WASHER.

NOTES:

1. THE PROJECT AREA IS LOCATED INSIDE OF THE NATIONAL AIRPORT PAVEMENT TESTING FACILITY, BUILDING NUMBER 296, WILLIAM J. HUGHES TECHNICAL CENTER, LOCATED AT THE ATLANTIC CITY INTERNATIONAL AIRPORT, EGG HARBOR TOWNSHIP, NEW JERSEY 08405.
2. THE HORIZONTAL CONTROL NETWORK IS REFERENCED TO A LOCAL COORDINATE SYSTEM ALIGNED WITH THE NAPTF TESTING AREA CENTER LINE. THE VERTICAL CONTROL NETWORK IS ALSO REFERENCED TO A LOCAL ASSUMED DATUM.
3. LOCATION OF THE STAGING AREA SHOWN IS APPROXIMATE. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

LEGEND

- CENTER LINE MARKER - MAG NAIL
- CONTROL POINT - MAG NAIL
- MANHOLE

40' 0 40' 80' 120'

GRAPHIC SCALE

1" = 40'

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

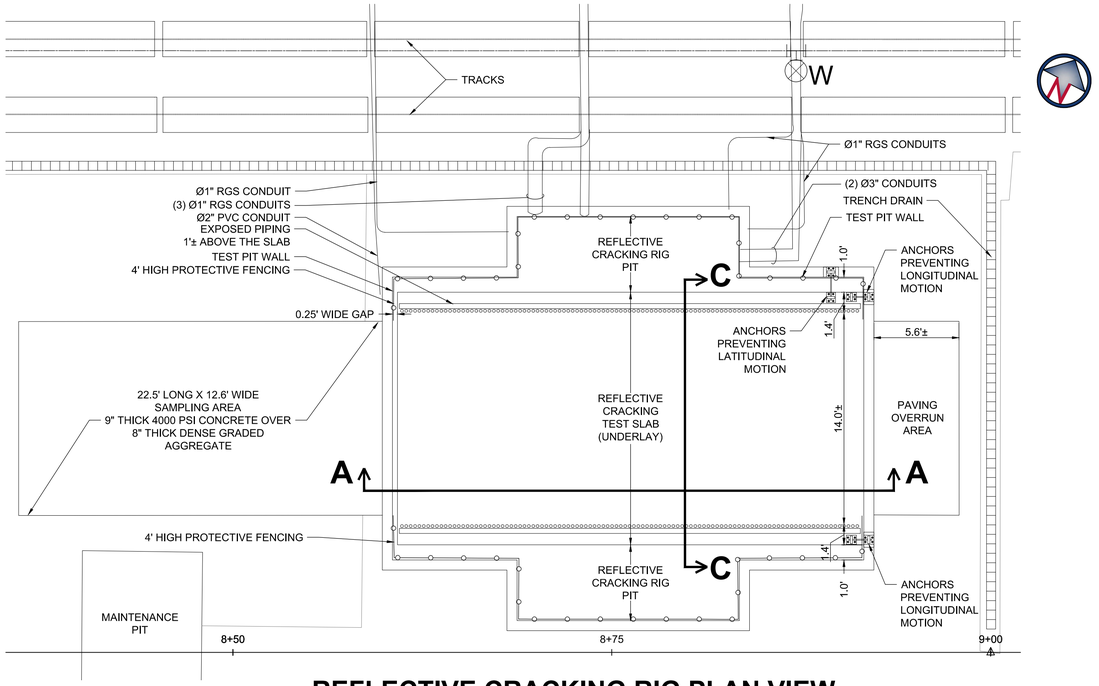
NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

	NAME	DATE
DRAWN	M.MAZUREK	02/10/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

REFLECTIVE CRACKING PHASE II
NAPTF BUILDING ACCESS AND CONTROL NETWORK PLAN

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 3 OF 7

CAD FILE: REFL-CRACK-PHA2-GNRL.DWG

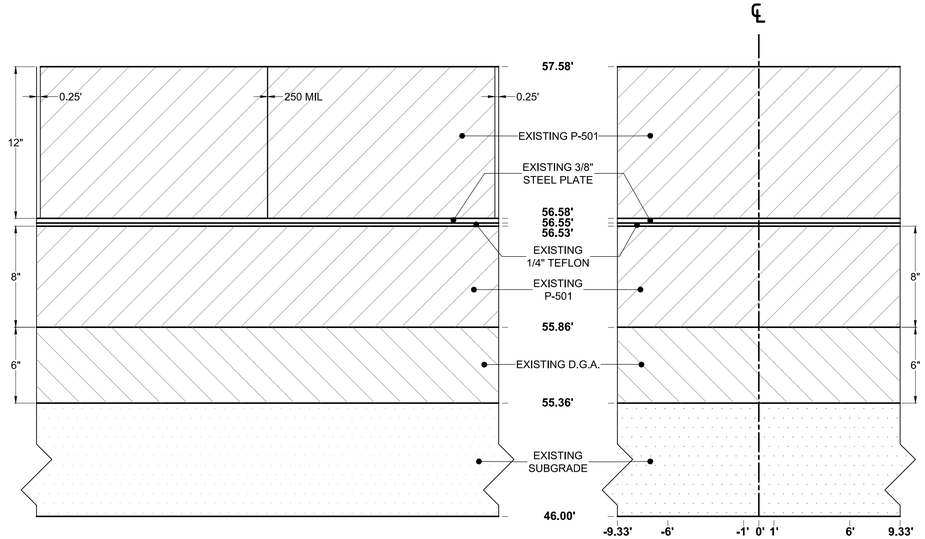


REFLECTIVE CRACKING RIG PLAN VIEW

SCALE: 1"=5'

REFLECTIVE CRACKING TEST AREA LOOKING EAST VIEW

N.T.S.



SECTION A-A

SECTION C-C

EXISTING TEST AREA UNDERLAY DETAIL

HORIZONTAL SCALE: 1"=5'
VERTICAL SCALE: 1"=0.5'

LEGEND:

- P-501 CONCRETE PAVEMENT (PORTLAND CEMENT CONCRETE)
- DENSE GRADED AGGREGATE
- SUBGRADE

5' 0 5' 10' 15'

GRAPHIC SCALE

1" = 5'

REFLECTIVE CRACKING TEST AREA LOOKING WEST VIEW

N.T.S.

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

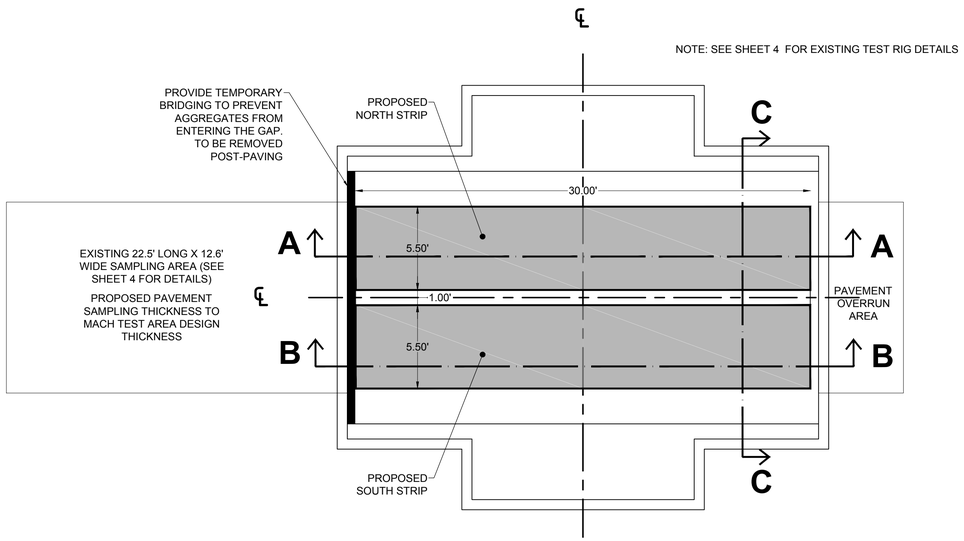
NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

	NAME	DATE
DRAWN	M.MAZUREK	02/10/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

REFLECTIVE CRACKING
TESTING AREA EXISTING CONDITIONS PLAN

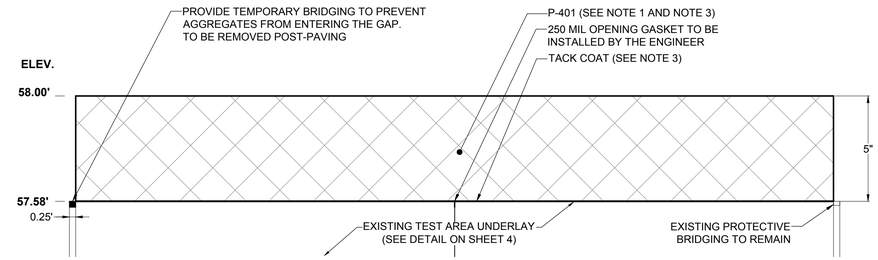
PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 4 OF 7

CAD FILE: REFL-CRACK-PHA2-GNRL.DWG



PLAN VIEW

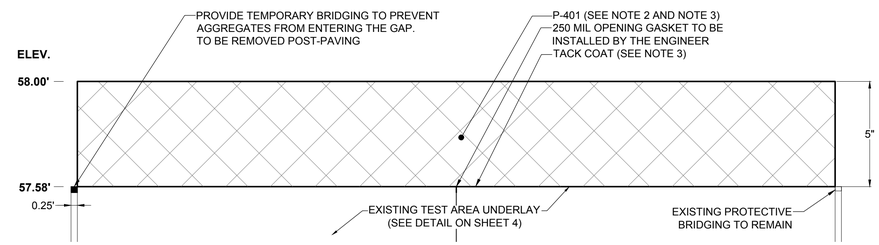
SCALE: 1"=5'



SECTION A-A (NORTH STRIP)

HORIZONTAL SCALE: 1"=3'

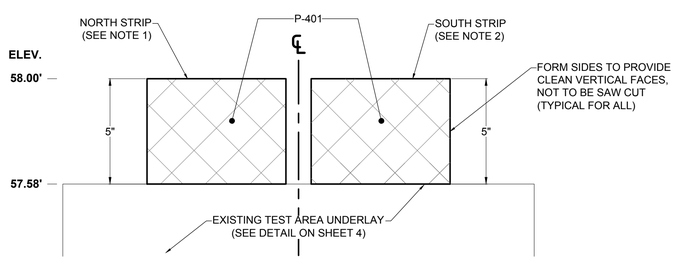
VERTICAL SCALE: 1"=0.3'



SECTION B-B (SOUTH STRIP)

HORIZONTAL SCALE: 1"=3'

VERTICAL SCALE: 1"=0.3'



SECTION C-C

HORIZONTAL SCALE: 1"=3'

VERTICAL SCALE: 1"=0.3'

NOTES:

1. PLACE THE NORTH SIDE TEST STRIP IN TWO (2) 2½" COMPACTED LIFTS.
2. PLACE THE SOUTH SIDE TEST STRIP IN TWO (2) 2½" COMPACTED LIFTS.
3. STRAIGHT ASPHALT BINDER (I.E., PG 64-22) SHALL BE APPLIED BETWEEN LIFTS AND ON TOP OF THE CONCRETE AS A TACK COAT, AT AN APPLICATION

LEGEND:

P-401 PLANT MIX BITUMINOUS PAVEMENT

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

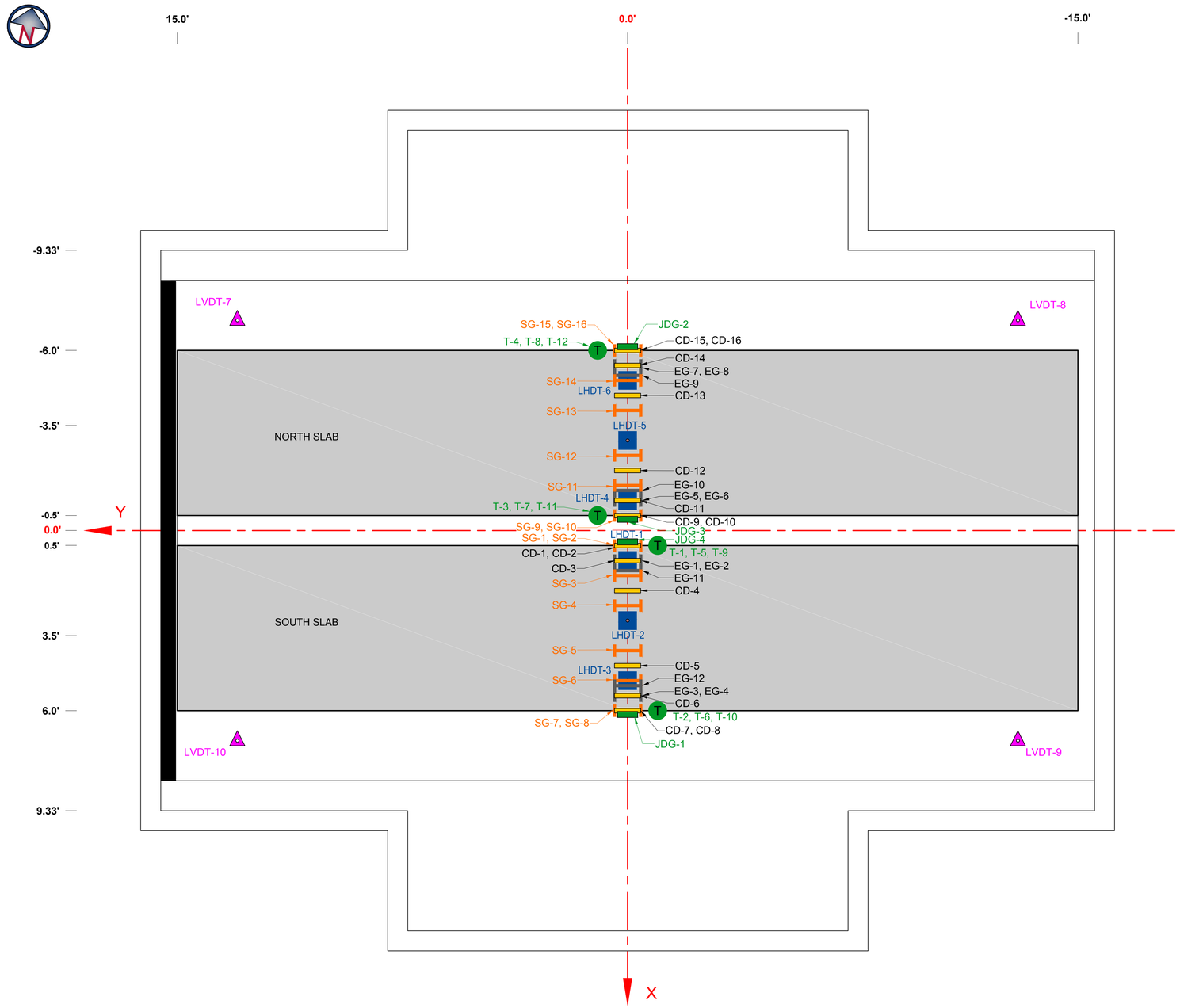
	NAME	DATE
DRAWN	M.MAZUREK	02/10/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

REFLECTIVE CRACKING PHASE 2

CONSTRUCTION PLAN

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 5 OF 7

CAD FILE: REFL-CRACK-PHA2-CONST.DWG



PLAN VIEW

SCALE: 1"=2'

REFLECTIVE CRACKING PHASE II INSTRUMENTATION

Sensor Type	Embeded/ Surface	Label	Location						Comments
			Layer	X"	X'	Y"	Y'	Z "	
Strain Gage Dynatest	Embeded	EG-1	Asphalt	12	1.00	0	0.00	0.5	South Slab, Inoperative
Strain Gage Dynatest	Embeded	EG-2	Asphalt	12	1.00	0	0.00	3.0	South Slab, Inoperative
Strain Gage Dynatest	Embeded	EG-3	Asphalt	66	5.50	0	0.00	3.0	South Slab,
Strain Gage Dynatest	Embeded	EG-4	Asphalt	66	5.50	0	0.00	0.5	South Slab,
Strain Gage Dynatest	Embeded	EG-5	Asphalt	-12	-1.00	0	0.00	0.5	North Slab, Inoperative
Strain Gage Dynatest	Embeded	EG-6	Asphalt	-12	-1.00	0	0.00	3.0	North Slab,
Strain Gage Dynatest	Embeded	EG-7	Asphalt	-66	-5.50	0	0.00	3.0	North Slab,
Strain Gage Dynatest	Embeded	EG-8	Asphalt	-66	-5.50	0	0.00	0.5	North Slab,
Strain Gage CTL	Embeded	EG-9	Asphalt	-62	-5.17	0	0.00	0.5	North Slab,
Strain Gage CTL	Embeded	EG-10	Asphalt	-16	-1.33	0	0.00	0.5	North Slab, Inoperative
Strain Gage CTL	Embeded	EG-11	Asphalt	16	1.33	0	0.00	0.5	South Slab,
Strain Gage CTL	Embeded	EG-12	Asphalt	62	5.17	0	0.00	0.5	South Slab,
CampbellSci Strain Gage	Surface	ST350	Asphalt						Not Used
Strain Gage	Surface	SG-1	Asphalt	6	0.50	0	0.00	2.5	South Slab,
Strain Gage	Surface	SG-2	Asphalt	6	0.50	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-3	Asphalt	18	1.50	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-4	Asphalt	30	2.50	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-5	Asphalt	48	4.00	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-6	Asphalt	60	5.00	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-7	Asphalt	72	6.00	0	0.00	5.0	South Slab,
Strain Gage	Surface	SG-8	Asphalt	72	6.00	0	0.00	2.5	South Slab,
Strain Gage	Surface	SG-9	Asphalt	-6	-0.50	0	0.00	2.5	North Slab,
Strain Gage	Surface	SG-10	Asphalt	-6	-0.50	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-11	Asphalt	-18	-1.50	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-12	Asphalt	-30	-2.50	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-13	Asphalt	-48	-4.00	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-14	Asphalt	-60	-5.00	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-15	Asphalt	-72	-6.00	0	0.00	5.0	North Slab,
Strain Gage	Surface	SG-16	Asphalt	-72	-6.00	0	0.00	2.5	North Slab,
Crack Detector	Surface	CD-1	Asphalt	6	0.50	0	0.00	1.0	South Side
Crack Detector	Surface	CD-2	Asphalt	6	0.50	0	0.00	4.0	South Side
Crack Detector	Surface	CD-3	Asphalt	12	1.00	0	0.00	5.0	South Side
Crack Detector	Surface	CD-4	Asphalt	24	2.00	0	0.00	5.0	South Side
Crack Detector	Surface	CD-5	Asphalt	54	4.50	0	0.00	5.0	South Side
Crack Detector	Surface	CD-6	Asphalt	66	5.50	0	0.00	5.0	South Side
Crack Detector	Surface	CD-7	Asphalt	72	6.00	0	0.00	4.0	South Side
Crack Detector	Surface	CD-8	Asphalt	72	6.00	0	0.00	1.0	South Side
Crack Detector	Surface	CD-9	Asphalt	-6	-0.50	0	0.00	1.0	North Slab,
Crack Detector	Surface	CD-10	Asphalt	-6	-0.50	0	0.00	4.0	North Slab,
Crack Detector	Surface	CD-11	Asphalt	-12	-1.00	0	0.00	5.0	North Slab,
Crack Detector	Surface	CD-12	Asphalt	-24	-2.00	0	0.00	5.0	North Slab,
Crack Detector	Surface	CD-13	Asphalt	-54	-4.50	0	0.00	5.0	North Slab,
Crack Detector	Surface	CD-14	Asphalt	-66	-5.50	0	0.00	5.0	North Slab,
Crack Detector	Surface	CD-15	Asphalt	-72	-6.00	0	0.00	4.0	North Slab,
Crack Detector	Surface	CD-16	Asphalt	-72	-6.00	0	0.00	1.0	North Slab,
Joint Displacement Gage (long)	Surface	JDG-1	Concrete	73.5	6.13	0	0.00	0.0	South Slab,
Joint Displacement Gage (long)	Surface	JDG-2	Concrete	-73.5	-6.13	0	0.00	0.0	North Slab,
Joint Displacement Gage (short)	Surface	JDG-3	Concrete	-4.5	-0.38	0	0.00	0.0	North Slab,
Joint Displacement Gage (short)	Surface	JDG-4	Concrete	4.5	0.38	0	0.00	0.0	South Slab,
Crack Opening Gage	Surface	COG-1	Asphalt						Will install once crack
Crack Opening Gage	Surface	COG-2	Asphalt						appears on surface
Thermocouple	Surface	T-1	Asphalt	6	0.50	-12	-1.00	5.0	South Slab,
Thermocouple	Surface	T-2	Asphalt	72	6.00	-12	-1.00	5.0	South Slab,
Thermocouple	Surface	T-3	Asphalt	-6	-0.50	12	1.00	5.0	North Slab,
Thermocouple	Surface	T-4	Asphalt	-72	-6.00	12	1.00	5.0	North Slab,
Thermocouple	Embeded	T-5	Asphalt	6	0.50	-12	-1.00	2.5	South Slab,
Thermocouple	Embeded	T-6	Asphalt	72	6.00	-12	-1.00	2.5	South Slab,
Thermocouple	Embeded	T-7	Asphalt	-6	-0.50	12	1.00	2.5	North Slab,
Thermocouple	Embeded	T-8	Asphalt	-72	-6.00	12	1.00	2.5	North Slab,
Thermocouple	Embeded	T-9	Concrete	6	0.50	-12	-1.00	0.0	South Slab,
Thermocouple	Embeded	T-10	Concrete	72	6.00	-12	-1.00	0.0	South Slab,
Thermocouple	Embeded	T-11	Concrete	-6	-0.50	12	1.00	0.0	North Slab,
Thermocouple	Embeded	T-12	Concrete	-72	-6.00	12	1.00	0.0	North Slab,
Potentiometer	Embeded	LHDT-1	Concrete	12	1.00	0	0.00	-1.875	South Slab,
Potentiometer	Embeded	LHDT-2	Concrete	36	3.00	0	0.00	-1.875	South Slab,
Potentiometer	Embeded	LHDT-3	Concrete	60	5.00	0	0.00	-1.875	South Slab,
Potentiometer	Embeded	LHDT-4	Concrete	-12	-1.00	0	0.00	-1.875	North Slab,
Potentiometer	Embeded	LHDT-5	Concrete	-36	-3.00	0	0.00	-1.875	North Slab,
Potentiometer	Embeded	LHDT-6	Concrete	-60	-5.00	0	0.00	-1.875	North Slab,
LVDT	Outside corner	LVDT-7	Concrete	-84	-7.00	156	13.00	-2.0	West/North Corner
LVDT	Outside corner	LVDT-8	Concrete	-84	-7.00	-156	-13.00	-2.0	East/North Corner
LVDT	Outside corner	LVDT-9	Concrete	84	7.00	-156	-13.00	-2.0	East/South Corner
LVDT	Outside corner	LVDT-10	Concrete	84	7.00	156	13.00	-2.0	West/South Corner

NOTE:

Z - VERTICAL DISTANCE IN INCHES MEASURED FROM BOTTOM OF ASPHALT LAYER IN UPWARD DIRECTION.

INSTRUMENT KEY		
	EG	EMBEDDED DYNATEST STRAIN GAGE
	CD	CRACK DETECTOR
	JDG	JOINT DISPLACEMENT GAGE
	LHDT	POTENTIOMETER
	LVDT	LINEAR VARIABLE DISPLACEMENT TRANSDUCER
	SG	SURFACE STRAIN GAGE
	T	THERMOCOUPLE

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

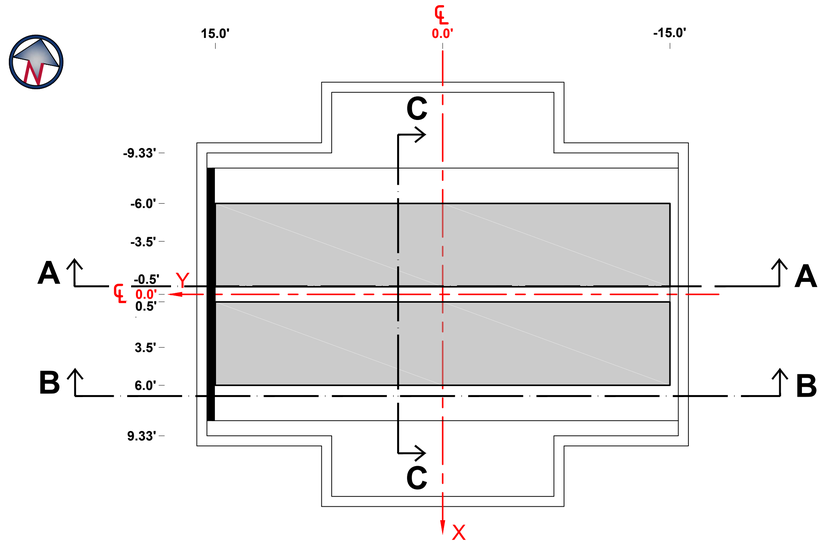
NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

	NAME	DATE
DRAWN	M.MAZUREK	02/15/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

REFLECTIVE CRACKING PHASE II
INSTRUMENTATION PLAN

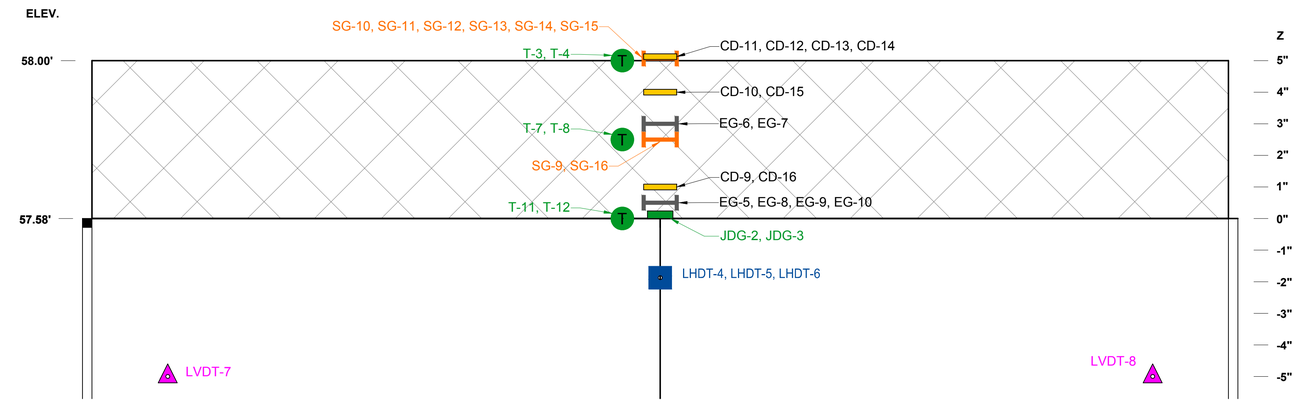
PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 6 OF 7

CAD FILE: REFL-CRACK-PHA2-INSTR.DWG



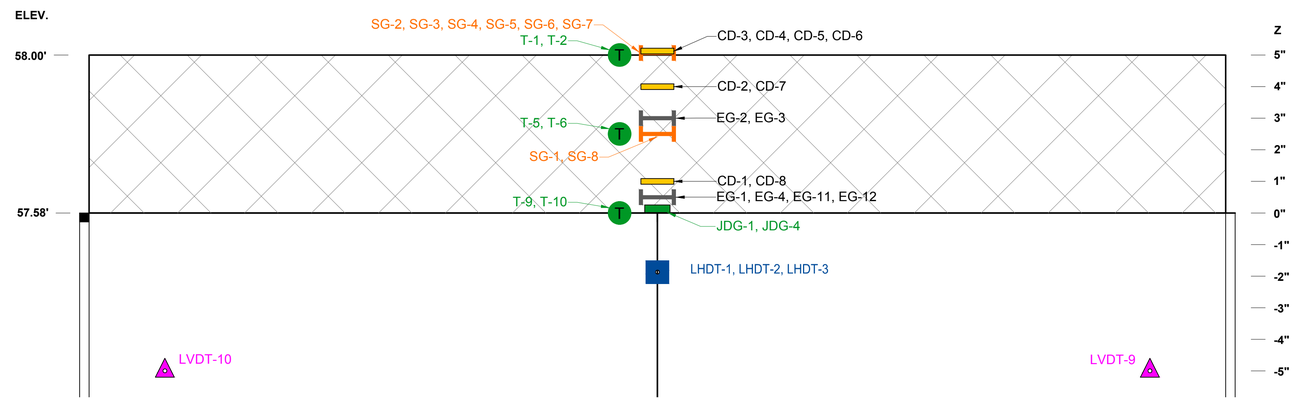
PLAN VIEW

SCALE: 1"=5'



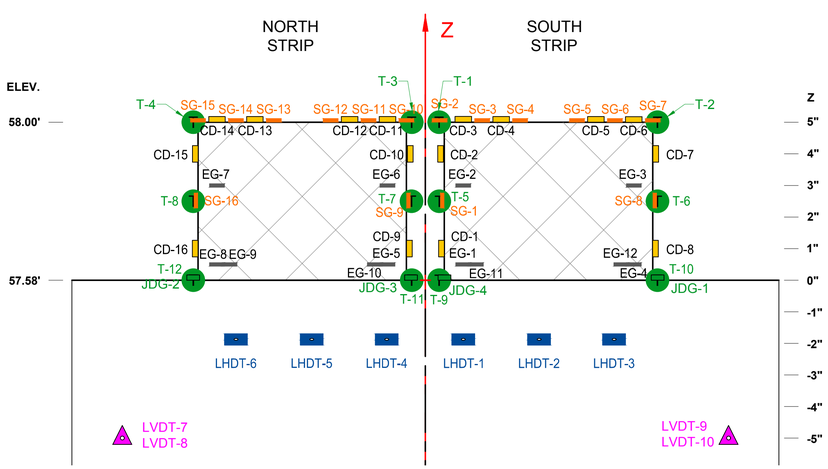
SIDE VIEW A-A (NORTH STRIP)

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'



SIDE VIEW B-B (SOUTH STRIP)

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'



SIDE VIEW C-C

HORIZONTAL SCALE: 1"=2'
VERTICAL SCALE: 1"=0.2'

LEGEND:

P-401 PLANT MIX BITUMINOUS PAVEMENT

INSTRUMENT KEY		
	EG	EMBEDDED DYNATEST STRAIN GAGE
	CD	CRACK DETECTOR
	JDG	JOINT DISPLACEMENT GAGE
	LHDT	POTENTIOMETER
	LVDT	LINEAR VARIABLE DISPLACEMENT TRANSDUCER
	SG	SURFACE STRAIN GAGE
	T	THERMOCOUPLE

NO.	REVISIONS	DATE	BY	CHK	APR

CSRA, INC.
1201 NEW ROAD, SUITE 242
LINWOOD, NEW JERSEY 08221
PHONE: (609) 601-6800

FOR

NATIONAL AIRPORT PAVEMENT TEST FACILITY
ATLANTIC CITY AIRPORT, NJ

	NAME	DATE
DRAWN	M.MAZUREK	02/15/2017
CHECKED	H.YIN	
FAA APPROVAL DATE:		

REFLECTIVE CRACKING PHASE II

INSTRUMENTATION PLAN SIDE VIEWS

PROJECT NO: | SIZE: ANSI D | SCALE: AS NOTED | SHEET 7 OF 7

CAD FILE: REFL-CRACK-PHA2-INSTR.DWG