

# IRRIGATION NOTES

ALL PRESSURE LINES SHALL BE TESTED FOR TWO HOURS UNDER HYDROSTATIC PRESSURE OF 150 PSI AND BE PROVEN WATER TIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR TEST.

ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE PLANS.

THE SPRINKLER SYSTEM IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT TO THE OWNER'S AUTHORIZED REPRESENTATIVE ANY DIFFERENCE BETWEEN THE WATER PRESSURE SHOWN ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

THE FINAL LOCATION OF THE AUTOMATIC CONTROLLER SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION. 120 VOLT ELECTRICAL POWER AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE FINAL HOOK-UP FROM THE ELECTRICAL OUTLET TO THE CONTROLLER IN ACCORDANCE WITH LOCAL ELECTRICAL CODE.

THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS, UNDER BUILDING/WALL FOUNDATIONS, AND OUTSIDE OF THE PROJECT BOUNDARY ARE FOR PLAN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE CONTROL AND QUICK COUPLING VALVES 6" TO 12" AWAY FROM HARDSCAPE FOR EASY ACCESS.

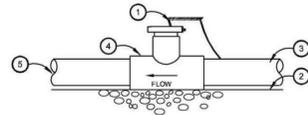
THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND THROTTLING THE FLOW CONTROL AT EACH VALVE TO OBTAIN OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.

DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN SITE DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN FORESEEN AND CONSIDERED IN THE ENGINEERING. THE OWNER'S AUTHORIZED REPRESENTATIVE SHOULD BE INFORMED OF SUCH OBSTRUCTIONS AND DIFFERENCES, BUT IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

INSTALL ALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN CONSTRUCTION DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS OF ALL SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.

IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS AND NEAR STRUCTURES.

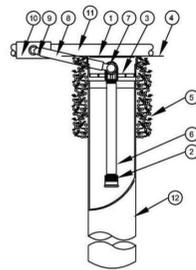
DRAINAGE OF WATER THROUGH SPRINKLER HEADS WILL NOT BE ALLOWED. SOME SPRINKLERS WILL REQUIRE THE INSTALLATION OF AN ANTI-DRAIN VALVE IN THE RISER NIPPLE TO PREVENT DRAINAGE. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL AN ANTI-DRAIN VALVE AS REQUIRED AT ANY SPRINKLER SHOWING SIGNS OF DRAINING AFTER THE IRRIGATION SYSTEM HAS OPERATED FROM AN ON TO OFF POSITION. INSTALLATION OF ANTI-DRAIN VALVES SHALL BE INCLUDED IN THE BID PRICE WITHOUT ADDITIONAL COST TO THE OWNER.



### LEGEND:

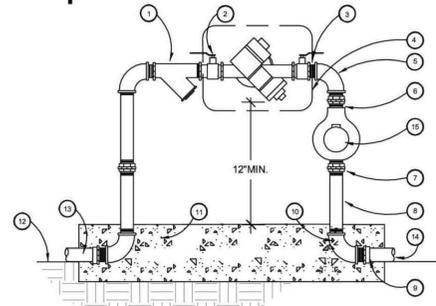
1. FLOW SENSOR WIRE, TO CONTROLLER
2. FINISH GRADE
3. UV RATED MAINLINE 2" OF CLEAN PIPE UPSTREAM OF SENSOR
4. CALSENSE FLOW SENSOR
5. UV RATED 1/2" OF CLEAN PIPE DOWNSTREAM OF SENSOR

**J | FLOW SENSOR** N.T.S.



1. 4-INCH GRATE (INCLUDED)
2. BUBBLER: RAIN BIRD 1401 0.25 GPM (INCLUDED) - OR APPROVED EQUAL
3. ROOT WATERING SYSTEM: (INCLUDES 1401 0.25 GPM BUBBLER (OR APPROVED EQUAL) WITH RISER, GRATE, SWING ASSEMBLY, 1/2" MALE NPT INLET, AND BASKET CANISTER)
4. FINISH GRADE
5. PEA GRAVEL AND RWS SAND SOCK (RWS-SOCK) (OR APPROVED EQUAL)
6. 1/2-INCH PVC SCH 80 NIPPLE (INCLUDED)
7. 1/2-INCH 90-DEGREE ELBOW (INCLUDED)
8. 1/2-INCH SWING ASSEMBLY (INCLUDED)
9. 1/2-INCH MALE NPT INLET (INCLUDED)
10. UV RATED PVC SCH 40 TEE OR EL
11. UV RATED LATERAL PIPE SET ON-GRADE
12. 4-INCH BASKET WEAVE CANISTER (INCLUDED)

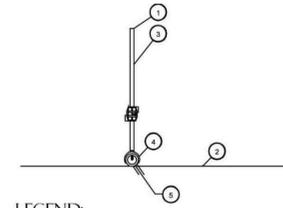
**G | TREE BUBBLER** N.T.S.



### LEGEND:

1. BRASS WYE STRAINER W/ 60 MESH MONEL SCREEN
2. BALL VALVE-2 PLACES
3. BRASS NIPPLE-TYPICAL 4 PLACES
4. BACKFLOW PREVENTOR ASSEMBLY
5. BRASS 90 ELL
6. BRASS NIPPLE-TYP. 2 PLACES
7. BRASS UNION-TYP. 2 PLACES
8. BRASS NIPPLE-TYP. 2 PLACES
9. SCH. 40 PVC MALE ADAPTOR-TYP. 2 PLACES
10. BRASS 90 ELL-TYP. 2 PLACES
11. CONCRETE FOUNDATION
12. FINISH GRADE
13. TO POINT OF CONNECTION
14. FLOW TO SYSTEMS
15. WATER METER (LINE SIZE)

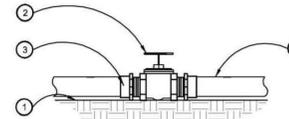
**H | BACK-FLOW PREVENTER DETAIL** N.T.S.



### LEGEND:

1. SURFACE FLOW EMITTER OUTLET SHALL BE INSTALLED 3" MIN. ABOVE FINISHED GRADE. TUBING SHOULD BE INSTALLED HIGH AND TRIMMED DOWN TO FINAL HEIGHT ABOVE GRADE AFTER TESTING THE SYSTEM
2. FINISH GRADE
3. INSTALL TUBING RISER PLUMB
4. SURFACE FLOW EMITTER ASSEMBLY WITH 1/2" PIPE SADDLE/BARB, EMITTER, AND 1/4" POLYETHYLENE TUBING RISER. SEE IRRIGATION PLAN FOR EMITTER VOLUME.
5. SURFACE FLOW PRE-PUNCHED SCH 40 UV RATED PVC PIPE. SEE IRRIGATION PLAN FOR SPACING OF HOLES/EMITTERS. PIPE SHALL BE INSTALLED ON-GRADE

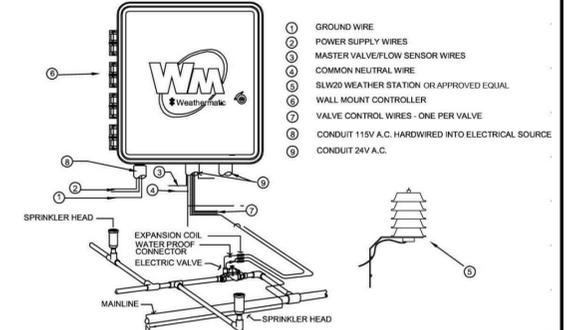
**D | BUBBLER** N.T.S.



### LEGEND:

1. FINISH GRADE
2. GATE VALVE
3. PVC MALE ADAPTER-TYP.
4. UV RATED PRESSURE MAINLINE PIPE

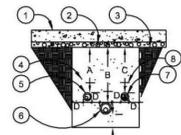
**E | GATE VALVE** N.T.S.



1. GROUND WIRE
2. POWER SUPPLY WIRES
3. MASTER VALVE/FLOW SENSOR WIRES
4. COMMON NEUTRAL WIRE
5. SLW20 WEATHER STATION OR APPROVED EQUAL
6. WALL MOUNT CONTROLLER
7. VALVE CONTROL WIRES - ONE PER VALVE
8. CONDUIT 115V A.C. HARDWIRED INTO ELECTRICAL SOURCE
9. CONDUIT 24V A.C.

**A | CONTROLLER** N.T.S.

### SLEEVE

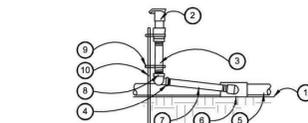


### LEGEND:

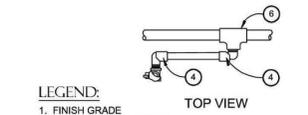
1. PAVING
2. BASE MATERIAL
3. EARTH SURFACE
4. SAND BACKFILL
5. SLEEVED LATERAL PIPE
6. SLEEVE MAIN LINE
7. CONTROL WIRES USE PVC ELEC. SLEEVES UNDER PAVING
8. DETECTABLE WARNING TAPE

- A. 24"
- B. 30"
- C. 30"
- D. 6"

**B | SLEEVE INSTALLATION** N.T.S.



### SIDE VIEW

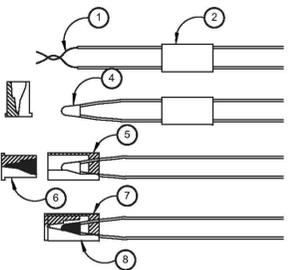


### TOP VIEW

### LEGEND:

1. FINISH GRADE
2. QUICK COUPLING VALVE
3. UV RATED SCH 80 PVC NIPPLE (LENGTH AS REQUIRED)
4. UV RATED PVC 90 DEG. STREET ELL. SCH. 80
5. UV RATED MAIN LINE PIPING
6. UV RATED MAIN LINE FITTING
7. UV RATED SCH 80 PVC NIPPLE - 6" MIN. LENGTH
8. UV RATED 90 DEG. ELL. SCH. 80 1" X 1"
9. STAINLESS STEEL COMPRESSION CLAMP, 2 REQUIRED.
10. #4 x 24" MIN. REBAR STAKE, SECURE AT QUICK COUPLER & NIPPLE RISER.

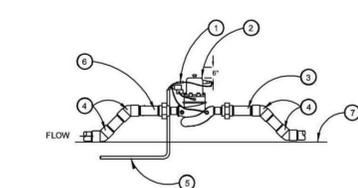
**K | QUICK COUPLING VALVE DETAIL** N.T.S.



### LEGEND:

1. STRIP WIRES APPROX. 5/8" FROM END
2. SLIP BASE SOCKET OVER END OF WIRES
3. APPLY SEALER TO OUTSIDE OF SEALING PLUG. FILL CAVITY WITH SEALER
4. PUT CRIMP SLEEVE OVER WIRE ENDS
5. PULL BASE SOCKET OVER END AS FAR AS POSSIBLE
6. PUSH SEALING PLUG INTO BASE SOCKET
7. PUSH WIRES TO END OF BASE SOCKET
8. RAIN BIRD SNAP-TITE WIRE CONNECTOR (OR APPROVED EQUAL)

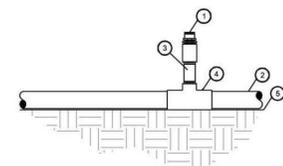
**L | WIRE CONNECTION** N.T.S.



### LEGEND:

1. WATERPROOF SPLICE
2. MASTER CONTROL VALVE
3. UV RATED SCH. 80 PVC NIPPLE LENGTH AS REQUIRED.
4. UV RATED LOWER LATERAL LINE W/ SCH. 80 PVC 45 ELBOWS.
5. TO IRRIGATION CONTROLLER 1" UV RATED PVC CONDUIT.
6. UV RATED SCHEDULE 80 PVC THREADED FITTINGS (AS REQUIRED)
7. FINISH GRADE

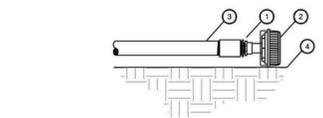
**I | MASTER VALVE** N.T.S.



### LEGEND:

1. AIR RELEASE VALVE
2. SURFACE FLOW UV RATED LATERAL LINE
3. 1/2" SCH. 80 NIPPLE LENGTH AS REQUIRED
4. PVC 1" x 1" x 3/4" T-W/ 3/4" SCH. 80 NIPPLE
5. FINISH GRADE

**F | AIR RELIEF VALVE** N.T.S.



### LEGEND:

1. 3/4" x 1/2" REDUCTION BUSHING
2. AUTOMATIC FLUSH VALVE
3. SURFACE FLOW UV RATED LATERAL LINE
4. FINISH GRADE

**C | AUTOMATIC FLUSH VALVE** N.T.S.

ADDITIVE BID OPTION **4** Provide all materials, equipment and labor to install all Landscaping as shown on Drawings L-1, L-2, L-3 and L-4, and described in specification division 32 - Exterior Improvements.

OPTION #4 LANDSCAPING INCLUDING ALL PLANTING, IRRIGATION, GRANITE BOULDERS, AND FLAGSTONE PATH. RUBBLE AND GRAVEL GROUND COVER TO REMAIN IN BASE BID. EXCLUDES PLANTING AND IRRIGATION AT PARKING LOT, SEE OPTION #7.

<p>393 9th Avenue, Suite 201 San Diego, California 92101 tel (619) 296-3150 fax (619) 501-7725 www.mlaso.com</p>		<p>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION DRYDEN FLIGHT RESEARCH CENTER EDWARDS, CA</p>		<p>APPROVALS</p> <table border="1"> <tr> <th>APPROVED</th> <th>DATE</th> </tr> <tr> <td><i>Dan Crowley</i></td> <td>8-18-11</td> </tr> <tr> <td><i>Dan Crowley</i></td> <td>8-18-11</td> </tr> <tr> <td><i>Gemma Flores</i></td> <td>8-18-11</td> </tr> <tr> <td><i>John Zellmer</i></td> <td>8-18-11</td> </tr> <tr> <td><i>Dan Miller</i></td> <td>8-18-11</td> </tr> <tr> <td><i>Ken Norlin</i></td> <td>8-18-11</td> </tr> </table>		APPROVED	DATE	<i>Dan Crowley</i>	8-18-11	<i>Dan Crowley</i>	8-18-11	<i>Gemma Flores</i>	8-18-11	<i>John Zellmer</i>	8-18-11	<i>Dan Miller</i>	8-18-11	<i>Ken Norlin</i>	8-18-11		
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<p>DRAWING TITLE</p> <p>LANDSCAPE IRRIGATION DETAILS</p>		<p>PROJECT TITLE</p> <p>8-18-11 FACILITIES SUPPORT CENTER 100% FINAL DESIGN</p>		<table border="1"> <tr> <td>DATE STRTD</td> <td>11-09-09</td> <td>DATE PRVD</td> <td>9-28-11</td> </tr> <tr> <td>DRAWN BY</td> <td>MLASO</td> <td>TRADE</td> <td>EDM-1703</td> </tr> <tr> <td>SCALE</td> <td>AS NOTED</td> <td>FILE NO.</td> <td>L-2</td> </tr> <tr> <td>FILE NAME</td> <td></td> <td>SHEET No.</td> <td>31 of 158</td> </tr> </table>		DATE STRTD	11-09-09	DATE PRVD	9-28-11	DRAWN BY	MLASO	TRADE	EDM-1703	SCALE	AS NOTED	FILE NO.	L-2	FILE NAME		SHEET No.	31 of 158
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**PLANT MATERIAL LEGEND**

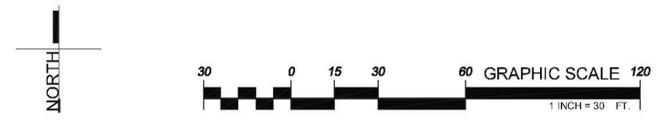
SYMBOL	DESCRIPTION	SIZE	NOTE
	CERCIDIUM FLORIDUM PALO VERDE	36" BOX	MULTI
	CHILOPSIS LINEARIS DESERT WILLOW	24" BOX	MULTI
	DALEA SPINOSA SMOKE TREE	24" BOX	MULTI
	FOUQUIERIA SPLENDENS OCOTILLO	15 GALLON	MULTI
	CREOSOTE LARREA TRIDENTATA CREOSOTE BUSH	15 GALLON	
	CHRYSOTHAMNUS NAUSEOSUS RABBITBRUSH	5 GALLON	
	AGAVE UTAHENSIS CENTURY PLANT	5 GALLON	
	AGAVE DESERTI CENTURY PLANT	5 GALLON	
	GRANITE BOULDERS, PROVIDE PHOTOS FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY WORK	60" DIA. 48" DIA. 36" DIA. 24" DIA.	

	LANDSCAPE BERMS, AT 1' CONTOURS FROM ON-SITE SPOILS WHERE POSSIBLE	
	3/4" GRAVEL TO MATCH SITE TOPSOIL	2" DEPTH OVER WEED CONTROL FABRIC
	4"-8" HONEY QUARTZ RUBBLE AVAILABLE THROUGH DSS OR APPROVED EQUAL (www.decorativestonesolutions.com)	OVER WEED CONTROL FABRIC; FABRIC SHALL BE COMPLETELY CONCEALED BY ROCK

**DRAINAGE NOTE:**  
CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE DRAINAGE AT 2% MIN. IN ALL PLANTER AREAS TO FINAL DRAINAGE LOCATIONS PER CIVIL ENGINEER'S DRAWINGS. THERE SHALL BE NO LOW SPOTS OR PLACES FOR STORM WATER TO POND AFTER CONSTRUCTION.

**ADDITIVE BID OPTION** 4 Provide all materials, equipment and labor to install all Landscaping as shown on Drawings L-1, L-2, L-3 and L-4, and described in specification division 32- Exterior Improvements.

**OPTION #4 LANDSCAPING INCLUDING ALL PLANTING, IRRIGATION, GRANITE BOULDERS, AND FLAGSTONE PATH. RUBBLE AND GRAVEL GROUND COVER TO REMAIN IN BASE BID. EXCLUDES PLANTING AND IRRIGATION AT PARKING LOT, SEE OPTION #7.**



PROVIDE OPTIONAL ALTERNATE BID FOR ALL LANDSCAPE IMPROVEMENTS WITHIN THIS AREA

**mLas**  
McBullough Landscape Architecture, Inc.  
363 9th Avenue, Suite 201  
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tel (619)296-3150 fax (619) 501-7725  
www.mlasd.com

DATE	SYM	REVISION	BY	APD

 <b>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION</b> <b>DRYDEN FLIGHT RESEARCH CENTER</b> <b>EDWARDS, CA</b>	<b>APPROVALS</b>		<b>DATE</b>	
	Chief, Facilities Engineering DAN CROWLEY <i>Dan Crowley</i>	Project Requestor / Customer DAN CROWLEY <i>Dan Crowley</i>	Facilities Project Manager GEMMA FLORES <i>Gemma Flores</i>	8-18-11 8-18-11 8-18-11
<b>DRAWING TITLE</b> LANDSCAPE PLANTING PLAN		Chief, Office of Protective Services JOHN ZELLMER <i>John Zellermer</i>	Chief - Safety, Health, and Environmental Office DAN MULLEN <i>Dan Mullen</i> DFRIC Chief Information Officer KEN NORLIN <i>Ken Norlin</i>	8-18-11 8-18-11
<b>PROJECT TITLE</b> 8-18-11 FACILITIES SUPPORT CENTER 100% FINAL DESIGN		DATE STRD: 11-10-08 DATE PRINTD: 5-25-11	DRAWN BY: MLASD SCALE: AS NOTED FILENAME: L-3	TRADE SH. No.: EDM-1703 SHEET No. 32 of 195

**OPTION #4 LANDSCAPING INCLUDING ALL PLANTING, IRRIGATION, GRANITE BOULDERS, AND FLAGSTONE PATH. RUBBLE AND GRAVEL GROUND COVER TO REMAIN IN BASE BID. EXCLUDES PLANTING AND IRRIGATION AT PARKING LOT, SEE OPTION #7.**

**ADDITIVE BID OPTION 4** Provide all materials, equipment and labor to install all Landscaping as shown on Drawings L-1, L-2, L-3 and L-4, and described in specification division 32 - Exterior Improvements.

**PLANTING NOTES**

REFER TO PLANTING SPECIFICATIONS AND DETAILS FOR SOIL PREPARATION, FERTILIZATION, MULCHING AND OTHER PLANTING INFORMATION.

NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.

VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY SHOULD FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLAN.

REPORT DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTION SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.

LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY AND ASSUME FULL RESPONSIBILITY FOR EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH DAMAGED UTILITIES.

LOCATION OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS, SIGNS, VENTS, HYDRANTS, TRANSFORMERS, ETC. ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.

OBTAIN ALL SOIL FOR LANDSCAPE PLANTING AREAS OR BERMS FROM ON-SITE EXCAVATIONS. SHOULD IMPORT SOIL BE NECESSARY, SUBMIT IMPORT SOIL TESTING RESULTS FOR APPROVAL PRIOR TO IMPORTATION. SOIL SHALL BE SANDY LOAM CONTAINING NO TOXIC CHEMICALS OR ELEMENTS WHICH MAY INHIBIT OR RETARD NORMAL PLANT GROWTH.

AFTER ROUGH GRADES HAVE BEEN ESTABLISHED IN PLANTING AREAS, HAVE SOIL SAMPLES TAKEN AT THE LOCATIONS INDICATED BY DESIGNATION. HAVE SAMPLES TESTED BY A CERTIFIED AGRONOMIC SOIL TESTING LABORATORY, FOR SOIL FERTILITY, AGRICULTURAL SUITABILITY TEST AND SOIL PREPARATION RECOMMENDATIONS. TAKE TWO SAMPLES AT EACH LOCATION: (1) GROUND LEVEL TO 10" DEEP, (2) 24" TO 36" DEEP. EACH SAMPLE SHALL CONTAIN APPROXIMATELY 1 QUART OF SOIL TO BE LABELED PER LOCATION AND DEPTH. INSTALL SOIL PREPARATION AND BACK FILL MIX TO CONFORM TO THESE RECOMMENDATIONS ONLY UPON RECEIPT OF WRITTEN CHANGE ORDER FROM OWNER. SUBMIT SOIL REPORT TO LANDSCAPE ARCHITECT PRIOR TO PLANTING. IF LOCATIONS FOR SOILS TEST ARE NOT FOUND ON PLANS IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE LANDSCAPE ARCHITECT FOR SAID LOCATIONS PRIOR TO BEGINNING ANY WORK.

KILL AND REMOVE ALL EXISTING WEEDS FROM SITE AREAS PER SPECIFICATIONS.

ASSURE POSITIVE DRAINAGE IN ALL PLANTING AREAS, 2% MINIMUM.

LOCATE AND TAG ALL PLANT MATERIAL. MATERIAL SHALL BE IN CONFORMANCE WITH PLANTING PLAN DESCRIPTIONS AND SPECIFICATIONS. ALL PLANT MATERIAL IS SUBJECT TO REVIEW AND APPROVAL PRIOR TO INSTALLATION. PROVIDE PHOTOS OF REPRESENTATIVE EXAMPLES OF EACH TAGGED BLOCK TO LANDSCAPE ARCHITECT MINIMUM 21 DAYS BEFORE ANTICIPATED DELIVERY. PHOTOS SHALL INCLUDE A PERSON FOR SCALE PURPOSES. LANDSCAPE ARCHITECT MAY OPT TO REVIEW MATERIAL AT GROWING NURSERY. MATERIAL DELIVERED TO THE SITE MAY BE REJECTED BASED ON UNHEALTHFUL APPEARANCE OR NON CONFORMANCE WITH SPECIFICATIONS EVEN IF PREVIOUSLY REVIEWED BY THE LANDSCAPE ARCHITECT OR OWNER.

ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM.

FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.

PLANTING QUANTITIES ARE GIVEN FOR CONVENIENCE ONLY. PLANT SYMBOLS AND SPECIFIED SPACING SHALL TAKE PRECEDENCE.

AT EDGES OF PLANTING AREAS, THE CENTER LINE OF THE LAST ROW OF SHRUBS AND/OR GROUND COVER SHALL BE LOCATED NO FARTHER FROM THE EDGE THAN ONE-HALF THE SPECIFIED ON-CENTER SPACING.

INSTALL GROUND COVER AND/OR SHRUB MASSES WITH TRIANGULAR SPACING UNLESS OTHERWISE INDICATED.

PROVIDE FERTILIZER TABLETS FOR EACH CONTAINER GROWN PLANT 1 GALLON AND LARGER PER SPECIFICATIONS.

FOR ALL TREES WITHIN 5'-0" OF PAVING, INSTALL ROOT BARRIER ALONG PAVING EDGE BY DEEP ROOT CORPORATION (800) 458-7668.

ALL CURVE TO CURVE AND CURVE TO TANGENT LINES SHALL BE NEAT, TRIM, SMOOTH AND UNIFORM.

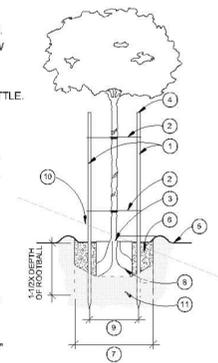
REMOVE ALL NURSERY STAKES AND ESPALIER RACKS IMMEDIATELY AFTER INSTALLATION UPON PROVIDING SUPPORT PER PLAN.

LIST ON THE PLANT MATERIAL GUARANTEE ALL EXISTING TREES THAT HAVE HAD WORK PERFORMED WITHIN 6' OF TRUNK.

DURING THE LENGTH OF THE GUARANTEE PERIOD BE RESPONSIBLE FOR PROPER STAKING AND/OR GUYING OF TREES TO ENSURE STABILITY.

**LEGEND:**

- (2) 2 IN. DIA. X 10 FT. LONG LODGEPOLE PINE STAKES, SET PERPENDICULAR TO PREVAILING WINDS.
- 1/2" I.C. "CONCHIES" OR EQUAL INSTALL PER MANUFACTURER'S.
- SET CROWN 2 IN. ABOVE FINISH GRADE.
- CUT TOP SECTION OFF STAKE 6" BELOW TREE CANOPY.
- FINISH GRADE.
- BACKFILL (SEE SPEC.) PUDDLE AND SETTLE. SET TREE 2 IN. ABOVE FINISH GRADE.
- 2 X ROOTBALL DIAMETER.
- TREE PIT-FILL AND SETTLE WITH A MIN. OF 24 HOURS PRIOR TO PLANTING.
- PLACE STAKES OUTSIDE OF ROOTBALL.
- FINISH GRADE AT EXISTING SLOPE (AS REQ'D).
- SUBGRADE.

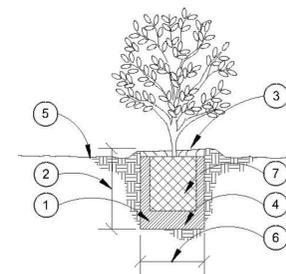


**NOTES:**

- TREES 15 GALLON SIZE OR SMALLER - PROVIDE SINGLE STAKE. CUT STAKE 6" BELOW TREE CANOPY.
- TREES 24 BOX SIZE OR LARGER - PROVIDE DOUBLE STAKE. CUT STAKE 6" BELOW TREE CANOPY.

**A TREE PLANTING DETAIL**

N.T.S.



**LEGEND:**

- BACKFILL MIX, (SEE SPECS.)
- MIN. 1 1/2x ROOTBALL DEPTH
- WATER RETENTION BASIN 4" HIGH
- PUDDLE AND SETTLE BACKFILL PRIOR TO PLACEMENT OF SHRUB
- FINISH GRADE
- 2x WIDTH OF ROOTBALL
- ROOTBALL

**B SHRUB PLANTING DETAIL**

N.T.S.

MODEL NO.	PKGS.	DIM. "A"
130-20	2	30" LG.
130-30	3	50" LG.
130-40	4	70" LG.
130-50	5	90" LG.

ITEM	QTY	PART NO.	DESCRIPTION
1	1	8-128-02-2	4 Pkgs. 10 GA X 8" DIA ANCHOR PLATE COVER
2	2	8-43-02-2	2x 10 GA X 8" DIA ANCHOR PLATE COVER
3	2	8-43-02-24	10 GA X 8" DIA ANCHOR PLATE COVER
4	2	1-10-102	5/8" X 1 1/2" SS FLT SET HD CAP SCR

**INSTALLATION FOR SURFACE MOUNT**

STEP 1:

- 1 - PC. BIKE LOOP, SURFACE MOUNT ( 1 )
- 2 - PCS. 3/8" THK SURFACE MOUNT PLATE ( 2 )
- 2 - PCS. 10 GA X 8" DIA ANCHOR PLATE COVER ( 3 )
- 2 - PCS. 5/8" X 1 1/2" SS FLT SET HD CAP SCREW ( 4 )

SLIDE 10 GA X 8" DIA ANCHOR COVER ( 3 ) OVER BIKE LOOP, SURFACE MOUNT ( 1 ) LEGS. ATTACH 3/8" THK, SURFACE MOUNT PLATE ( 2 ) TO BIKE LOOP, SURFACE MOUNT ( 1 ) USING ANCHOR ACCORDINGLY.

**INSTALLATION FOR SUB FLOOR**

SAME AS SURFACE MOUNT BUT DO NOT USE 10 GA X 8" DIA ANCHOR PLATE COVER.

**DuMor, inc.**  
P.O. Box 142 Mifflintown, PA 17059-0142

SCALE: NONE  
DATE DRAWN: 3/16/99  
DRAWN BY: GSC  
DATE REV.: 12/18/06  
REV. BY: ESS

TITLE: BIKE RACK  
REV. D  
DRAWING NUMBER: 130 SERIES  
SHEET: 1 OF 2

 mlaso Presbullaugh Landscape Architecture, Inc. 363 9th Avenue, Suite 201 San Diego, California 92101 Tel (619)296-3150 Fax (619) 501-1725 www.mlaso.com 	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION DRYDEN FLIGHT RESEARCH CENTER EDWARDS, CA		<b>APPROVALS</b> Chief, Facilities Engineering/Asset Mgmt. Office DAN CROWLEY <i>Dan Crowley</i> 8-18-11 Project Inspector/Customs DAN CROWLEY <i>Dan Crowley</i> 8-18-11 Facilities Project Manager GEMMA FLORES <i>Gemma Flores</i> 8-18-11 Chief, Office of Protective Services JOHN ZELLMER <i>John Zellermer</i> 8-18-11 Chief, Safety, Health, and Environment Office DAN MULLEN <i>Dan Mullen</i> 8-18-11 DFR Chief Information Officer KEN NORLIN <i>Ken Norlin</i> 8-18-11
	DRAWING TITLE LANDSCAPE PLANTING DETAILS		DATE STD'D 11-10-08 DATE PRINT'D 6-28-11 DRAWN BY MLASO TRADE SH. NO. EDM-1703 SCALE AS NOTED FILE NAME L-4 SHEET No. 33 of 195
PROJECT TITLE 8-18-11 FACILITIES SUPPORT CENTER 100% FINAL DESIGN			





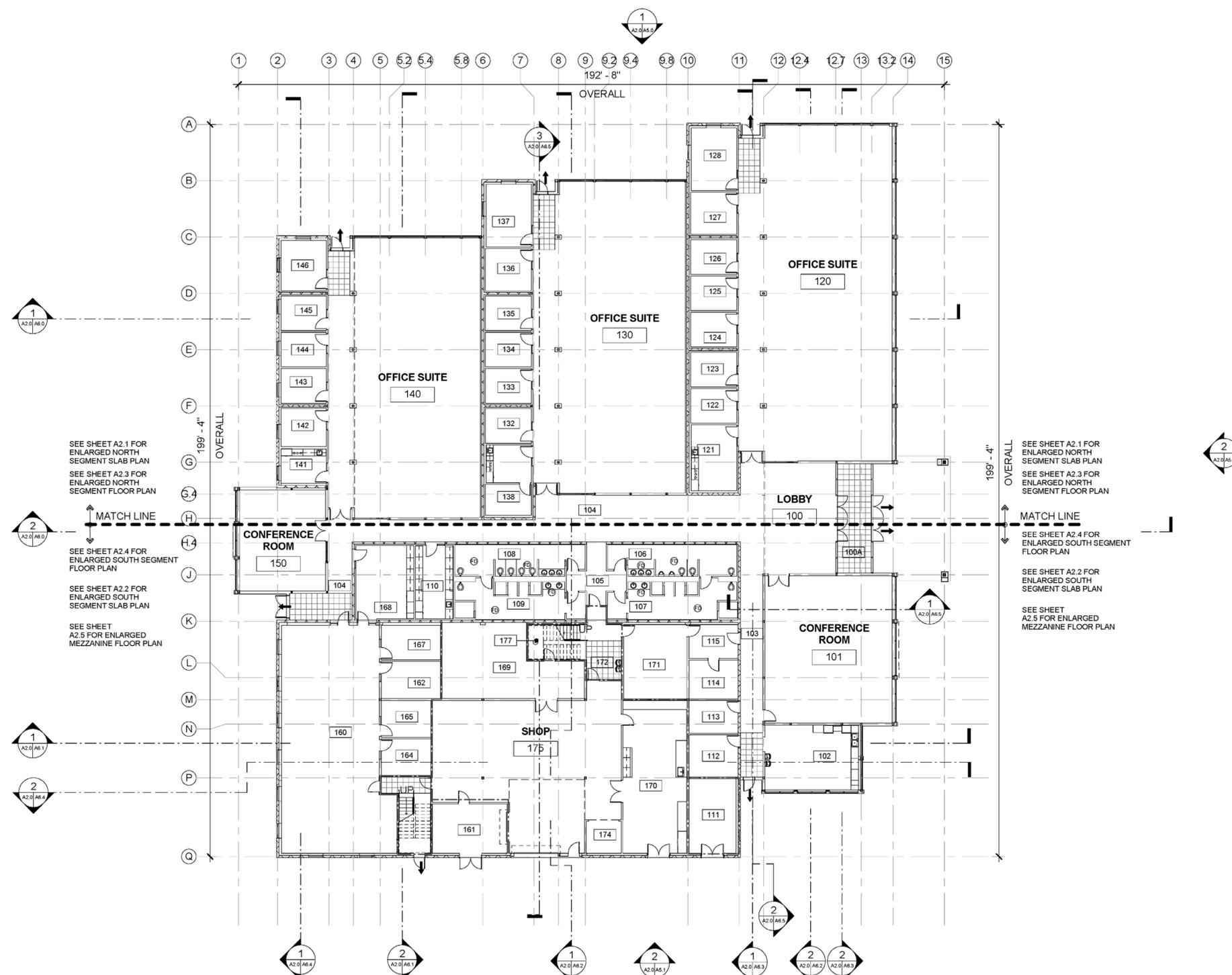




**PROJECT SQUARE FOOTAGE**

ROOM NUMBER	ROOM NUMBER	ROOM AREA	OCCUPANT TYPE
100	LOBBY	810 SF	B
100A	VESTIBULE	290 SF	B
101	CONFERENCE ROOM	1415 SF	B
102	BREAK ROOM	477 SF	B
103	CORRIDOR	343 SF	B
104	CORRIDOR	1322 SF	B
105	VESTIBULE	148 SF	B
106	MEN	289 SF	B
107	MEN'S SHOWER	338 SF	B
108	WOMEN	291 SF	B
109	WOMEN'S SHOWER	340 SF	B
110	HEALTH LAB	207 SF	B
111	ELECTRICAL	263 SF	B
112	COMM	155 SF	B
113	STORAGE	119 SF	B
114	SUPPLY	142 SF	B
115	LAUNDRY	124 SF	B
120	OFFICE SUITE	3877 SF	B
121	COPY	224 SF	B
122	OFFICE - A	119 SF	B
123	OFFICE - A	120 SF	B
124	OFFICE - A	120 SF	B
125	OFFICE - A	119 SF	B
126	OFFICE - A	120 SF	B
127	OFFICE - B	146 SF	B
128	CONFERENCE	219 SF	B
130	OFFICE SUITE	3488 SF	B
131	COPY	128 SF	B
132	OFFICE - A	120 SF	B
133	OFFICE - A	120 SF	B
134	OFFICE - A	119 SF	B
135	OFFICE - A	120 SF	B
136	OFFICE - B	145 SF	B
137	CONFERENCE	218 SF	B
138	COMM RM	107 SF	B
140	OFFICE SUITE	3129 SF	B
141	COPY	119 SF	B
142	OFFICE - B	132 SF	B
143	OFFICE - A	121 SF	B
144	OFFICE - A	120 SF	B
145	OFFICE - A	121 SF	B
146	CONFERENCE	176 SF	B
150	CONFERENCE ROOM	671 SF	B
160	OFFICE SUITE	1753 SF	B
161	HOT WORK SHOP	278 SF	F-1
162	OFFICE	164 SF	B
164	OFFICE	134 SF	B
165	OFFICE	134 SF	B
167	OFFICE	152 SF	B
168	PLAN AND TRAINING	317 SF	B
169	TOOL CRIB	638 SF	F-1
170	TEST & DEVELOPMENT SHOP/LAB	731 SF	F-1
171	JAN. STAFF	350 SF	B
172	VESTIBULE	146 SF	B
174	LIFT	87 SF	F-1
175	SHOP	1809 SF	F-1
177	STAIR #1	151 SF	B
178	STAIR #2	204 SF	B
200	MEZZANINE	6973 SF	S
201	BOILER ROOM	170 SF	F-1
205	CHILLER ROOM	170 SF	F-1
TOTAL SQUARE FEET =		35657 SQ. FT.	

BUILDING TYPE II - B



**FLOOR PLAN**

SCALE: 1/16" = 1'-0"

**LEGEND**  
 → MEANS OF EGRESS  
 == 1-HR RATED SEPARATION



**DEVELOPMENT ONE, INC.**  
 1611 East Fourth Street, Suite 250  
 Santa Ana, California 92701  
 J. Bruce Camino, Architect, AIA, NCARB  
 (714) 689-0288  
 (714) 648-0197 FAX

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 DRYDEN FLIGHT RESEARCH CENTER  
 EDWARDS, CA

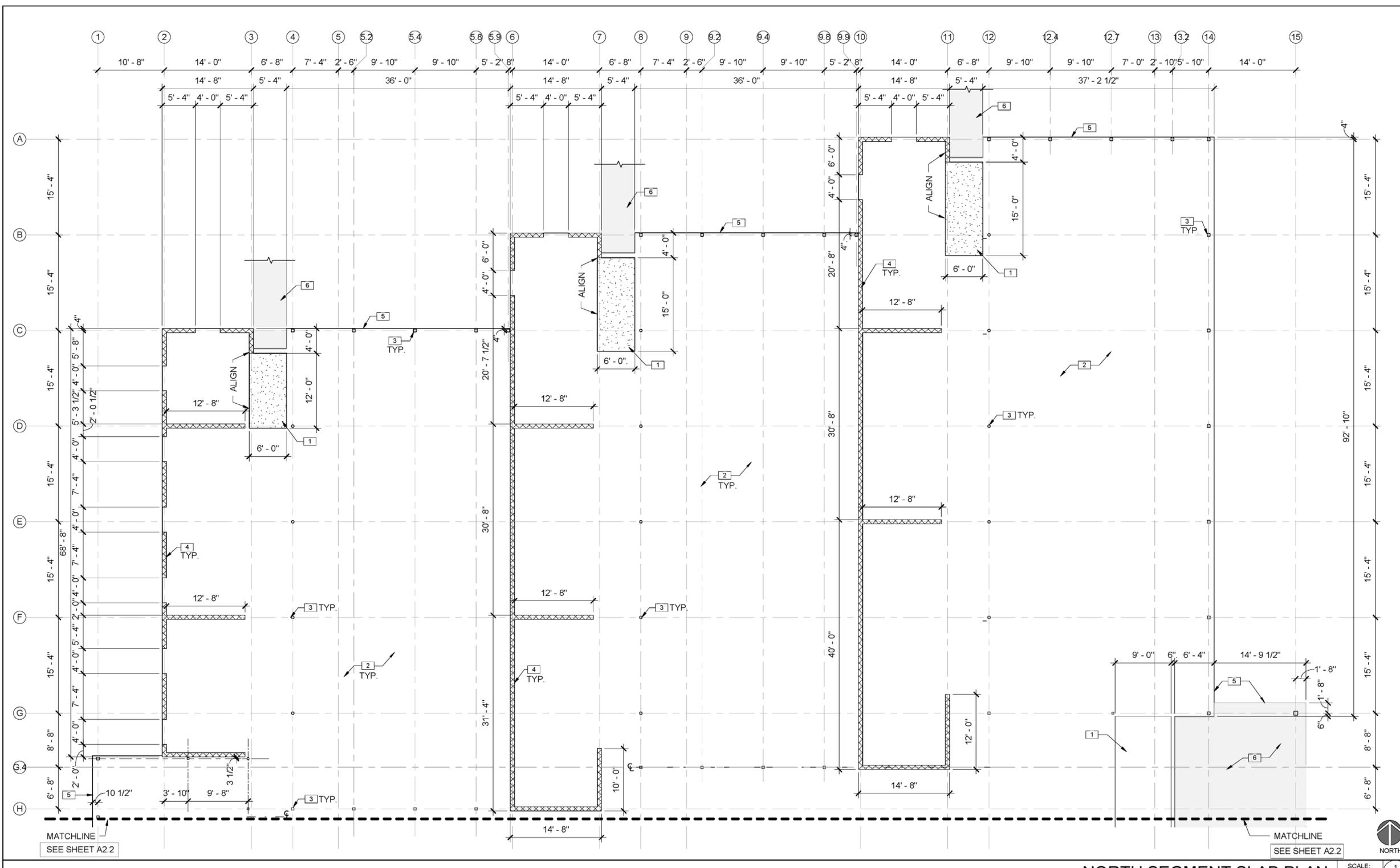
DRAWING TITLE  
**BUILDING FLOOR PLAN**

PROJECT TITLE  
 8-18-11  
 FACILITIES SUPPORT CENTER  
 100% FINAL DESIGN SUBMITTAL

APPROVALS	DATE
Chief, Facilities Engineering DAN CROWLEY	8-18-11
Project Recorder/Coordinator DAN CROWLEY	8-18-11
Facilities Project Manager GEMMA FLORES	8-18-11
Chief, Office of Protective Services JOHN ZELLNER	8-18-11
Chief, Safety, Health, and Environmental Office DAN MULLEN	8-18-11
DFRC Chief Information Officer KEN NORLIN	8-18-11

DATE STRTD	11/03/10	DATE PRNTD	05/23/11
DRAWN BY		TRADE	EDM-1703
SCALE	AS NOTED	SH No	
FILE NAME	A2.0	SHEET No.	38 of 195

DATE	SYM	REVISION	BY	A/PD



- KEYNOTES:**
- 1 DEPRESS SLAB 3/4"
  - 2 CONCRETE SLAB ON GRADE, SEE STRUCTURAL DWG
  - 3 STEEL COLUMN-SEE STRUCTURAL DRAWINGS
  - 4 BURNISHED 8" CMU WALL
  - 5 EDGE OF SLAB
  - 6 CONCRETE SIDEWALK, SEE CIVIL DRAWINGS ON PAVEMENT PLAN
- NOTE:  
REFER TO STRUCTURAL DRAWINGS FOR SLAB JOINT LOCATIONS

**NORTH SEGMENT SLAB PLAN**

SCALE: 1/8" = 1'-0" (A2.0) A2.1

- LEGEND:**
- SLAB DEPRESSION
  - CMU, PER STRUCTURAL
  - MATCHLINE
  - CONCRETE SIDEWALK, SEE CIVIL DWG'S



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DATE	SYM	REVISION	BY	AP'D

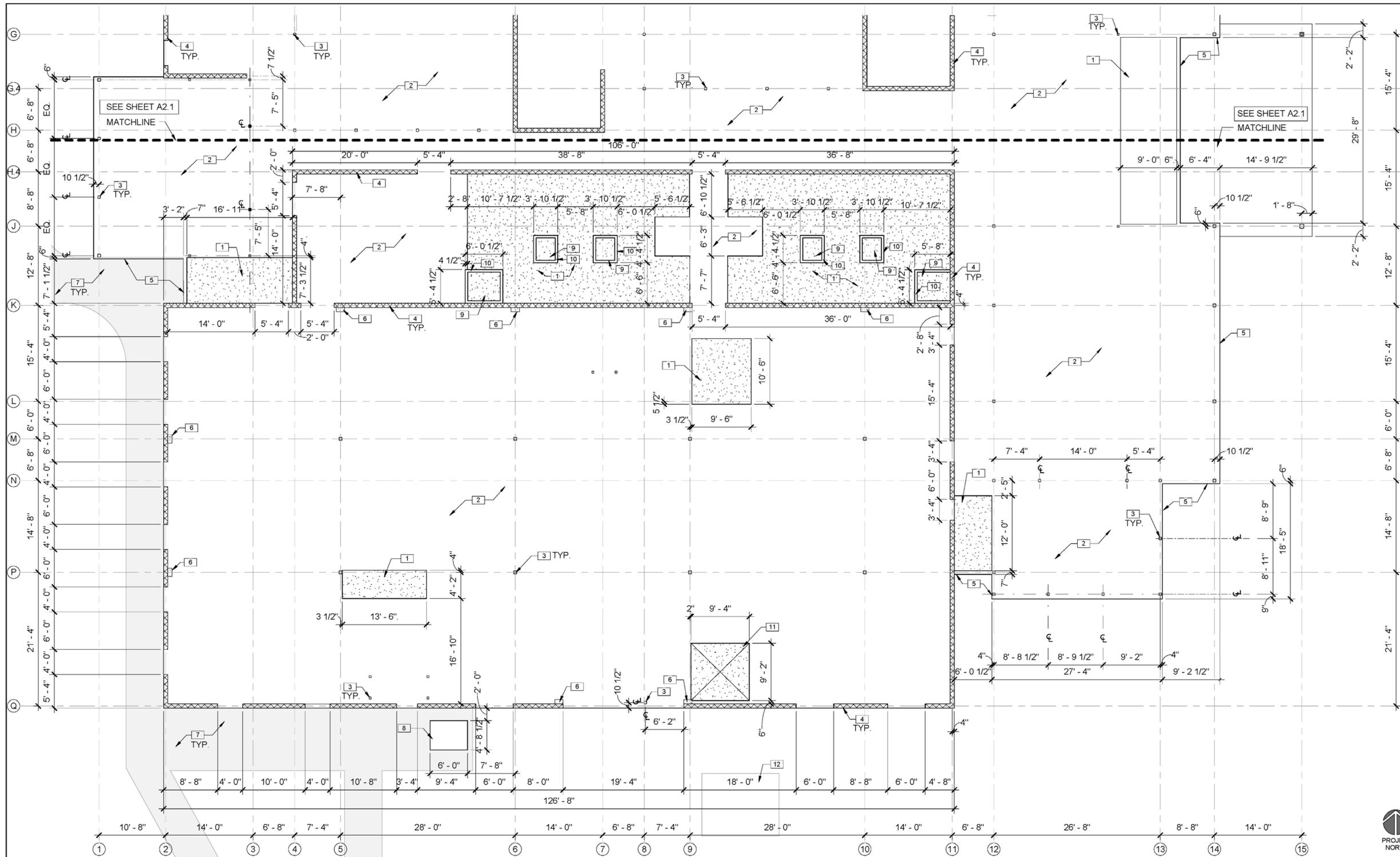
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 DRYDEN FLIGHT RESEARCH CENTER  
 EDWARDS, CA

**DRAWING TITLE**  
 NORTH SEGMENT SLAB PLAN

**PROJECT TITLE**  
 8-18-11  
 FACILITIES SUPPORT CENTER  
 100% FINAL DESIGN SUBMITTAL

APPROVALS		DATE
Chief, Facilities Engineering	<i>Dan Crowley</i>	8-18-11
Project Requestor/Contractor	<i>Dan Crowley</i>	8-18-11
Facilities Project Manager	<i>Gemma Flores</i>	8-18-11
Chief, Office of Protective Services	<i>John Zellmer</i>	8-18-11
Chief, Safety, Health, and Environmental Office	<i>Dan Mullen</i>	8-18-11
DFRC Chief Information Officer	<i>Ken Norlin</i>	8-18-11

DATE STRTD	11/04/10	DATE PRNTD	05/23/11
DRAWN BY	AS NOTED	TRADE	EDM-1703
SCALE	AS NOTED	SH No.	A2.1
FILE NAME	SHEET No. 39 of 195		



- KEYNOTES:**
- 1 DEPRESS SLAB 3/4"
  - 2 CONCRETE SLAB ON GRADE
  - 3 STEEL COLUMN - SEE STRUCTURAL DRAWINGS
  - 4 BURNISHED 8" CMU WALL
  - 5 EDGE OF SLAB
  - 6 CMU COLUMN, SEE STRUCTURAL DRAWINGS
  - 7 CONCRETE SIDEWALK, SEE CIVIL DRAWINGS ON PAVEMENT PLAN
  - 8 6" HIGH CONCRETE PAD FOR MECHANICAL EQUIPMENT, COORDINATE WITH APPROVED SUBMITTAL
  - 9 DEPRESS SLAB 2" FOR SHOWER AREA
  - 10 4" HIGH CONCRETE CURB AROUND SHOWER BASE
  - 11 COORDINATE SLAB DEPRESSION DIMENSIONS WITH APPROVED MATERIAL LIFT SUBMITTAL
  - 12 RECLAIM WATER EQUIPMENT, SEE PLUMBING DRAWINGS
- NOTE:  
REFER TO STRUCTURAL DRAWINGS FOR SLAB JOINT LOCATIONS

**SOUTH SEGMENT SLAB PLAN**

SCALE: 1/8" = 1'-0" (A2.0) A2.2

- LEGEND:**
- SLAB DEPRESSION
  - CMU, PER STRUCTURAL
  - MATCHLINE
  - CONCRETE SIDEWALK, SEE CIVIL DWG'S



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DATE	SYM	REVISION	BY	AP'D

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**DRAWING TITLE**  
 SOUTH SEGMENT SLAB PLAN

**PROJECT TITLE**  
 8-18-11  
 FACILITIES SUPPORT CENTER  
 100% FINAL DESIGN SUBMITTAL

APPROVALS		DATE	
Chief, Facilities Engineering	<i>Dan Crowley</i>	8-18-11	
Project Requester/Customizer	<i>Dan Crowley</i>	8-18-11	
Facilities Project Manager	<i>Gemma Flores</i>	8-18-11	
Chief, Office of Protective Services	<i>John Zellmer</i>	8-18-11	
Chief, Safety, Health, and Environmental Office	<i>Dan Mullen</i>	8-18-11	
DFRC Chief Information Officer	<i>Ken Norlin</i>	8-18-11	
DATE STRTD	11/04/10	DATE PRNTD	05/23/11
DRAWN BY	AS NOTED	TRADE	EDM-1703
SCALE	A2.2	SH No.	
FILE NAME	A2.2	SHEET No.	40 of 195