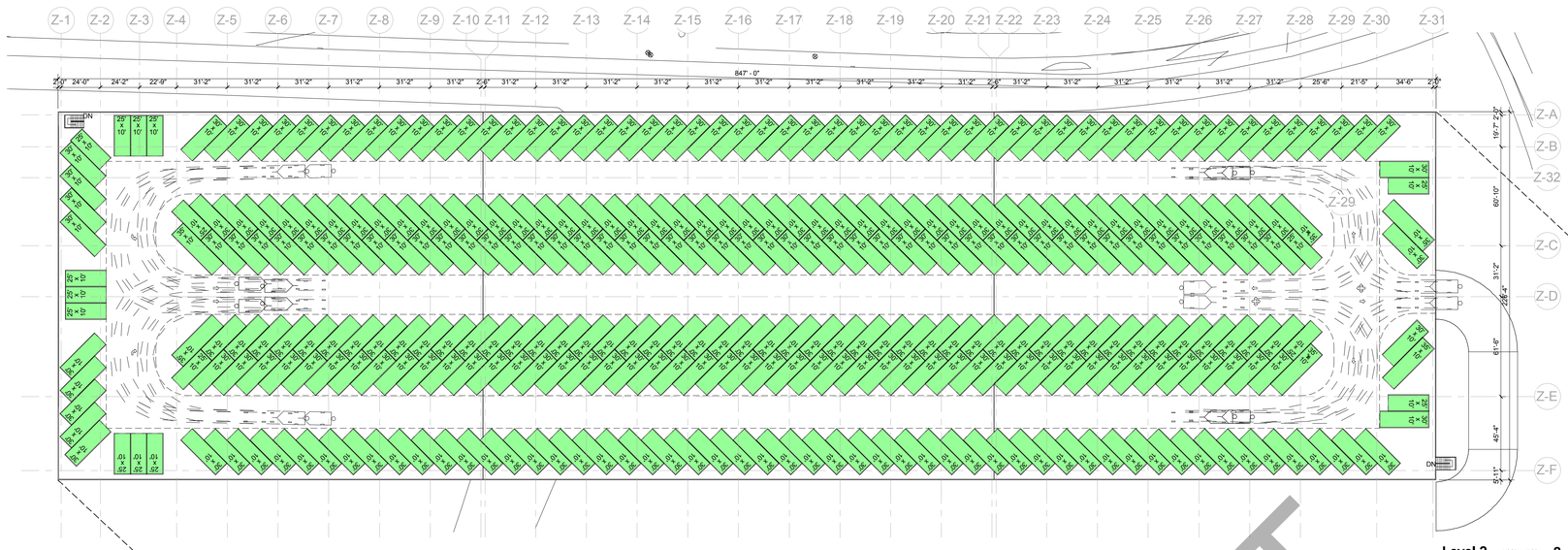
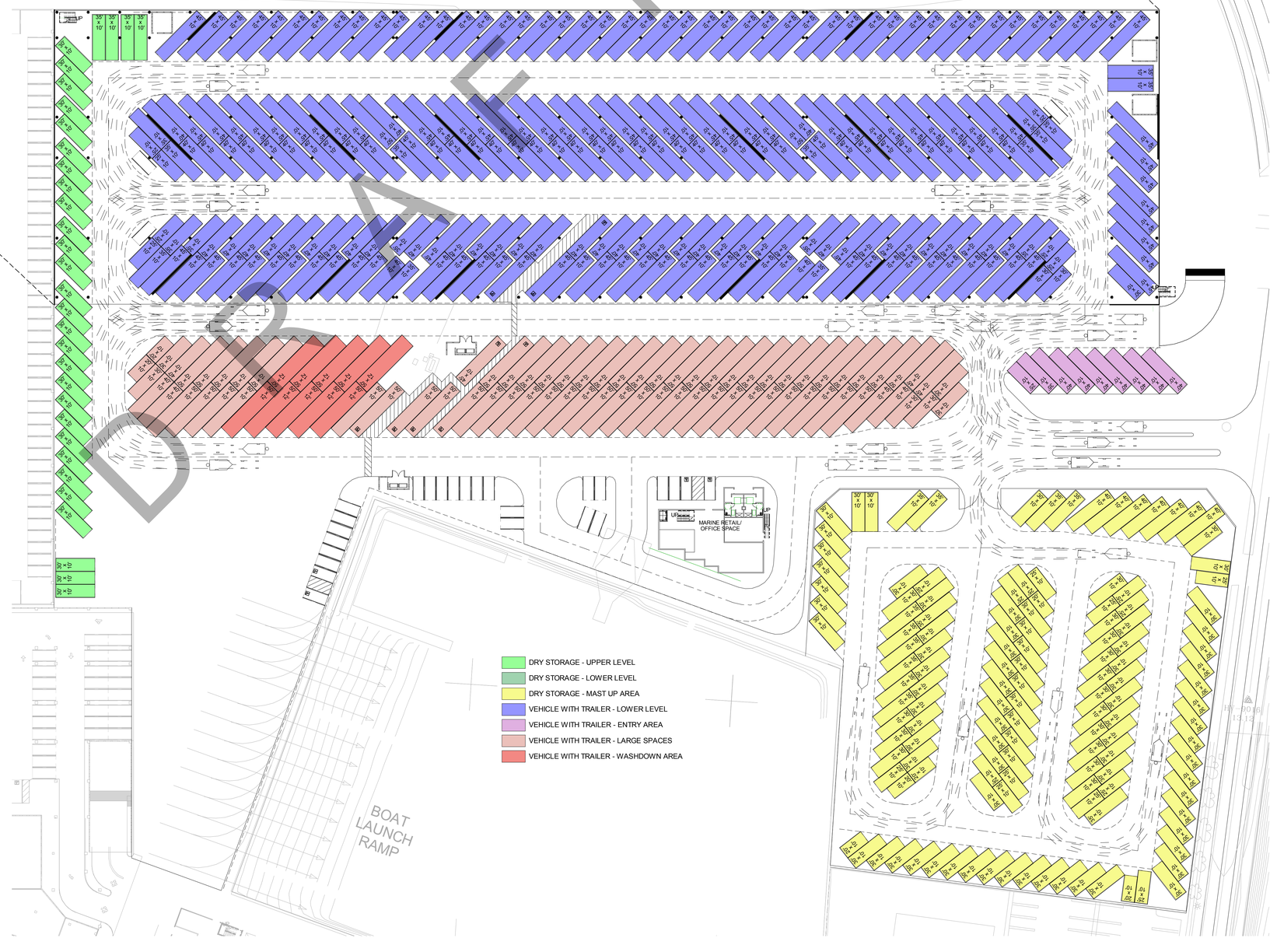



Level 2 1/32" = 1'-0" 2




**Dana Point Harbor PA 1 Plan B Dry Storage Deck**

| 4/19/2012 | Original Plan | Original % | Revised Plan | Revised % |
|---|---|---|---|---|
| **Dry Storage** | **493** | | **493** | |
| **UPPER LEVEL** | **323** | | **327** | |
| 10x20 | 16 | 5% | 0 | 0.0% |
| 10x25 | 0 | | 16 | 4.9% |
| 10x30 | 307 | 95% | 307 | 93.9% |
| 10x35 | 0 | | 4 | 1.2% |
| **LOWER LEVEL** | **41** | | **32** | |
| 10x30 | 41 | 100% | 28 | 87.5% |
| 10x35 | 0 | | 4 | 12.5% |
| **MAST-UP AREA** | **129** | | **134** | |
| 10x20 | 19 | 15% | 5 | 3.7% |
| 10x25 | 0 | | 14 | 10.4% |
| 10x30 | 103 | 80% | 96 | 71.6% |
| 10x35 | 0 | | 12 | 9.0% |
| 10x40 | 6 | 5% | 7 | 5.2% |
| **Vehicle with Trailer Spaces** | **334** | | **334** | |
| **Lower Level Trailer** | **264** | | **241** | |
| 10x25 | 0 | | 8 | 3.3% |
| 10x30 | 0 | | 3 | 1.2% |
| 10x35 | 0 | | 16 | 6.6% |
| 10X40 | 106 | 40% | 79 | 32.8% |
| 10x45 | 158 | 60% | 133 | 55.2% |
| 10x50 | 0 | | 2 | 0.8% |
| **Entry** | **10** | | **9** | |
| 10x25 | 0 | | 1 | 11.1% |
| 10x35 | 2 | 20% | | 0.0% |
| 10x35 | 0 | | 1 | 11.1% |
| 10x40 | 8 | 80% | 7 | 77.8% |
| **Large Spaces at Office** | **50** | | **74** | |
| 10x20 | 0 | | 2 | 2.7% |
| 10x30 | 0 | | 6 | 8.1% |
| 10x40 | 0 | | 4 | 5.4% |
| 10x45 | 0 | | 4 | 5.4% |
| 10X50 | 0 | | 58 | 78.4% |
| 12X50 | 50 | 100% | 0 | 0.0% |
| **Wash Down** | **10** | | **10** | |
| 12x50 | 10 | 100% | 10 | 100.0% |

| | | | | | |
|---|---|---|---|---|---|
| 493 | Boats | X | 0.25 | = | 124 Parking for boats |
| 5,600 | s.f. | / | 250 | = | 23 PA 1 Office Parking |
| 2,000 | s.f. | / | 200 | = | 10 PA 1 Small Marine Retail |
| | | | | | 157 Required Parking Spaces |

| | | | | |
|---|---|---|---|---|
| **Auto Spaces** | **157** | | **29** | |
| 9x18 | | | 27 | |
| 9x18 HC | | | 2 | |
| | | | 128 | Located in parking garage |

# DANA POINT HARBOR REVITALIZATION
# DRY BOAT STORAGE DECK ALTERNATIVE

COUNTY OF ORANGE

DANA POINT HARBOR DRIVE

DATE: 04/18/12

PROJECT #: Project Number

SCALE: 1/32" = 1'-0"

0

NORTH

SHEET #: A-1.00

## SITE PLAN



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, CA 92614
T 949.553.9100 F 949.553.9291
info@mve-institutional.com
www.mve-architects.com

# OC DANA POINT HARBOR REVITALIZATION
# DRY BOAT STORAGE DECK ALTERNATIVE

COUNTY OF ORANGE
DANA POINT HABOR DRIVE
DANA POINT, CALIFORNIA

DANA POINT HARBOR DRIVE

LIMIT OF WORK

EMBARCADERO PLACE

STREET OF THE GOLDEN LANTERN

PROPOSED DRY BOAT STORAGE DECK

REMOVE EXISTING TSUNAMI SOUND WARNING TOWER

EXISTING SEWER LIFT STATION TO REMAIN

REMOVE EXISTING ENTRY GATE HARDWARE AND ELECTRIC

REMOVE EXISTING CELL TOWER

REMOVE EXISTING DRIVEWAY APRON

PUERTO PLACE

LIMIT OF WORK

EXISTING BOAT LAUNCH CRANE TO REMAIN

LIMIT OF WORK

DRAFT

N

40' 0' 20' 40'
SCALE: 1" = 40'

## LEGEND

- LIMIT OF WORK
- REMOVE EXISTING PARKING LOT, INCLUDING AC PAVEMENT, CONCRETE RIBBON GUTTER, CURB AND GUTTER, CURB ONLY, AND PARKING LOT LIGHTING.
- REMOVE EXISTING LANDSCAPING
- REMOVE EXISTING BLOCK WALL
- REMOVE EXISTING SIDEWALK
- REMOVE EXISTING CHAIN LINK FENCE
- EXISTING STRUCTURES TO BE REMOVED

NOTE: FOR UNDERGROUND UTILITY REMOVALS, PLEASE SEE UTILITY EXHIBITS

| | |
|---|---|
| DATE: | 04/17/2012 |
| PROJECT #: | 307.08 |
| SCALE: | 1" = 40' |

0

NORTH

SHEET #: 1

## DEMOLITION EXHIBIT

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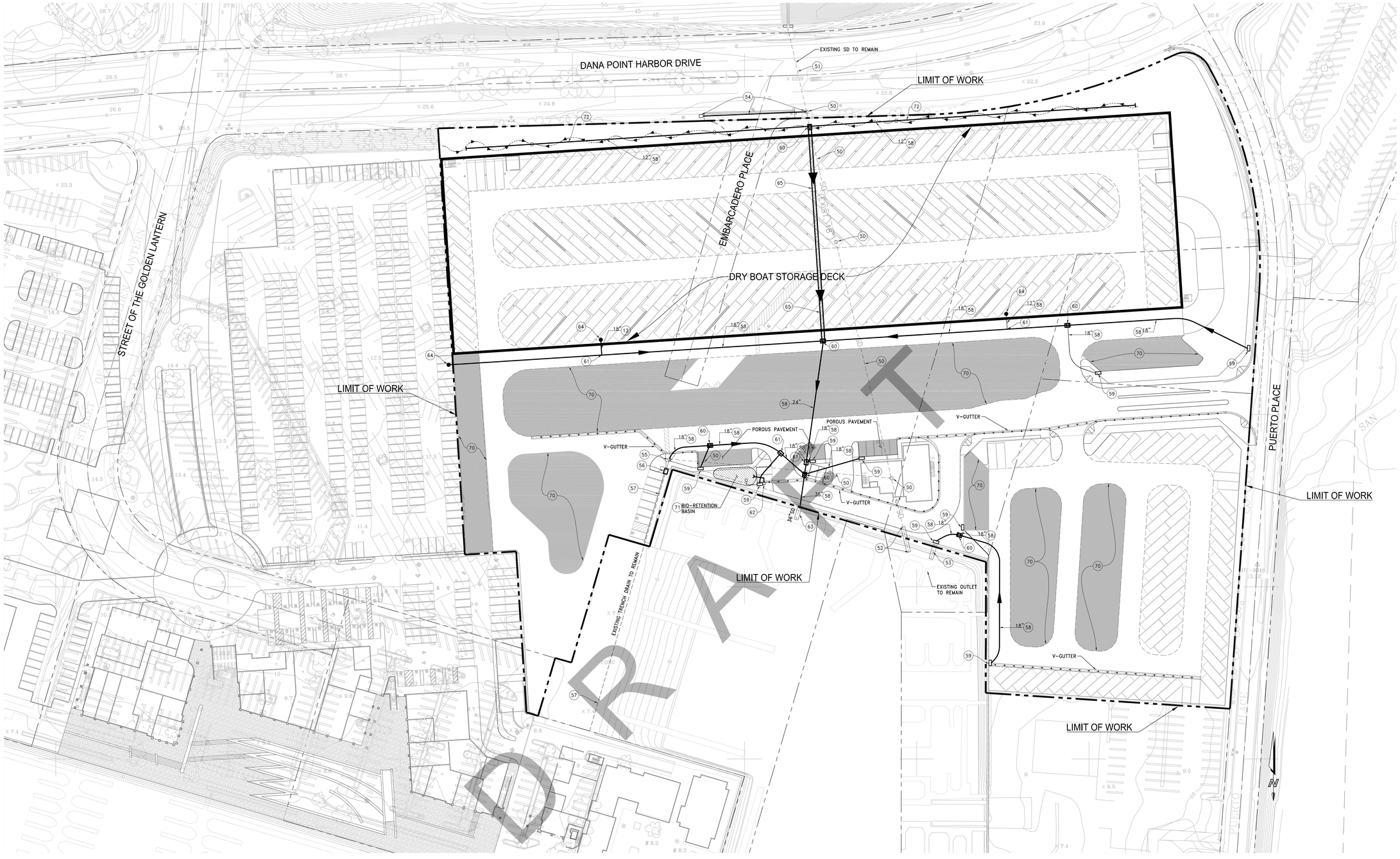




## STORM DRAIN NOTES

(50) REMOVE STORM DRAIN PIPELINE AND/OR STORM DRAIN MANHOLE

(51) PROTECT IN PLACE EXISTING STORM DRAIN PIPELINE BETWEEN INLET EAST OF DANA POINT HARBOR DRIVE AND NEW JUNCTION STRUCTURE INTERCEPT LOCATION.

(52) ABANDON 30-FEET OF 18" RCP AND FILL WITH CONCRETE BACKFILL

(53) PROTECT IN PLACE EXISTING OUTLET STRUCTURE.

(54) PROTECT IN PLACE EXISTING 15" STORM DRAIN, CATCH BASIN, AND MANHOLE JUNCTION STRUCTURE AT DANA POINT HARBOR DRIVE AND EMBARCADERO PLACE INTERSECTION.

(55) MODIFY EXISTING JUNCTION STRUCTURE BY REMOVING EXISTING 18" STORM DRAIN FROM SOUTH WALL AND PLUGGING HOLE AND BY CREATING NEW STORM DRAIN OUTLET IN EAST WALL.

(56) PROTECT IN PLACE EXISTING STORM WATER FILTER AND DEBRIS CHAMBER

(57) PROTECT IN PLACE EXISTING TRENCH DRAIN

(58) CONSTRUCT RCP STORM DRAIN PIPE-SIZE PER PLAN

(59) CONSTRUCT CATCH BASIN (ASSUME W=3.5')

(60) CONSTRUCT JUNCTION STRUCTURE W/ MANHOLE

(61) CONSTRUCT JUNCTION STRUCTURE W/O MANHOLE

(62) CONSTRUCT FIRST FLUSH LOW FLOW INTERCEPTOR

(63) REMOVE EXISTING 18" OUTLET PIPE AND STRUCTURE AND REPLACE WITH A 36" OUTLET PIPE AND STRUCTURE

(64) CONNECT STORM DRAIN LATERAL TO ROOF DRAIN

(65) 18" RCP ENCASED IN 36" RCP SLEEVE W/BACKFILL

## WATER QUALITY NOTES

(70) CONSTRUCT POROUS PAVEMENT STRUCTURAL SECTIONS (4" CONRETE PAVERS/2" BEDDING COURSE/4" NO 57 OPEN GRADED BASE/6" NO. 2 STONE BASE)

(71) CONSTRUCT 3' DEEP GRADED BIO-RETENTION BASIN (3:1 SIDE SLOPES) WITH GRATE INLET OUTLET STRUCTURE

(72) CONSTRUCT BIOSWALE W/SUBDRAIN

# OC DANA POINT HARBOR REVITALIZATION
# DRY BOAT STORAGE DECK ALTERNATIVE

COUNTY OF ORANGE
DANA POINT HABOR DRIVE
DANA POINT, CALIFORNIA

DATE: 04/17/2012
PROJECT #: 307.08
SCALE: 1" = 40'
0
NORTH
SHEET #: 2

## DRAINAGE AND WATER QUALITY EXHIBIT

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Irvine, California 92606
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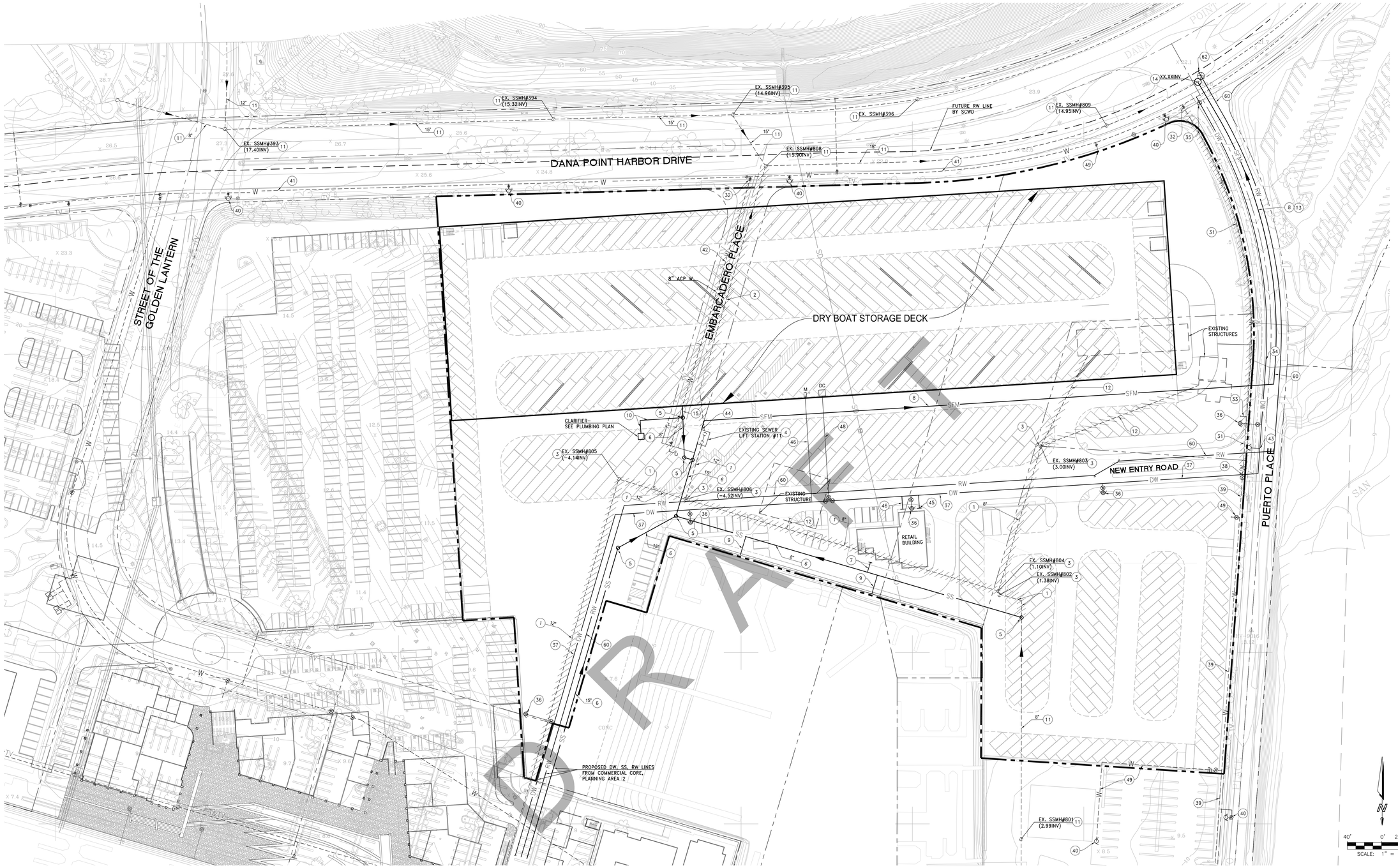




## SEWER NOTES

1. - ABANDON IN PLACE EXISTING SEWER GRAVITY MAIN (SIZE PER PLAN). REMOVE INTERFERING PORTIONS OF VCP SEWER GRAVITY MAIN. PLUG ENDS OF REMAINING VCP WITH 8" BRICK & MORTAR.
2. - ABANDON IN PLACE EXISTING 8" C.I.P. SEWER FORCE MAIN. REMOVE INTERFERING PORTIONS OF EXISTING CIP SEWER FORCE MAIN. CUT AND CAP ENDS AT PROPERTY LINE AND AT EXISTING LIFT STATION
3. - REMOVE EXISTING MANHOLE
4. - UPGRADE EXISTING LIFT STATION (BY OTHERS)
5. - CONSTRUCT 48" I.D. SEWER MANHOLE
6. - CONSTRUCT VCP SEWER, SIZE NOTED ON PLAN.
7. - CONSTRUCT 4" PVC SEWER LATERAL FOR RETAIL BUILDING
8. - CONSTRUCT 8" CIP SEWER FORCE MAIN
9. - CONSTRUCT 4" PVC SEWER LATERAL FOR BOAT SEWAGE PUMPOUT
10. - CONSTRUCT 6" PVC SEWER LATERAL FOR WASHDOWN AREA CLARIFIER
11. - PROTECT IN PLACE EXISTING SEWER GRAVITY MAIN (SIZE PER PLAN) AND GRAVITY MAIN MANHOLES
12. - ABANDON IN PLACE EXISTING BUILDING SEWER LATERAL
13. - SAWCUT, REMOVE, AND REPLACE EXISTING AC PAVEMENT IN PUERTO PLACE FOR CONSTRUCTION OF SEWER FORCE MAIN. PROVIDE TRAFFIC CONTROL AS NECESSARY
14. - CONSTRUCT NEW 48" I.D. SEWER MANHOLE IN DANA POINT HARBOR DRIVE. REMOVE INTERFERING PORTIONS OF EXISTING SEWER MAIN AS NECESSARY. SAWCUT, REMOVE, AND REPLACE EXISTING AC PAVEMENT IN DANA POINT HARBOR DRIVE. PROVIDE TRAFFIC CONTROL AS NECESSARY.
15. - CONSTRUCT 4" PVC SEWER LATERAL FOR DRY BOAT STORAGE DECK FLOOR DRAINS

## DOMESTIC WATER NOTES

31. - ABANDON EXISTING 10" ACP WATER LINE IN PUERTO PLACE BETWEEN DANA POINT HARBOR DRIVE AND NEW ENTRY ROAD.
32. - KEEP EXISTING GATE VALVE AND PROVIDE END CAP ON WEST SIDE OF GATE VALVE
33. - ABANDON EXISTING 2" WATER SERVICE LATERAL
34. - CONSTRUCT NEW 12" WATER MAIN IN PUERTO PLACE BETWEEN DANA POINT HARBOR DRIVE AND NEW ENTRY ROAD. SAWCUT, REMOVE AND REPLACE EXISTING AC PAVEMENT N PUERTO PLACE FOR CONSTRUCTION OF WATER MAIN, PROVIDE TRAFFIC CONTROL AS NECESSARY
35. - CONSTRUCT 12" GATE VALVE
36. - CONSTRUCT NEW FIRE HYDRANT INCLUDING GATE VALVE AND T-CONNECTION
37. - CONSTRUCT 12" WATER MAIN
38. - CONSTRUCT 12" WATER MAIN TO EX 10" WATER MAIN IN PUERTO PLACE WITH 12"x12"x10" TEE. KEEP EX 10" WATER MAIN IN PUERTO PLACE WEST OF NEW ENTRY ROAD
39. - PROTECT IN PLACE EX 10" ACP WATER MAIN IN PUERTO PLACE WEST OF NEW ENTRY ROAD
40. - PROTECT IN PLACE EXISTING FIRE HYDRANT
41. - PROTECT IN PLACE EXISTING 12" WATER MAIN IN DANA POINT HARBOR DRIVE
42. - ABANDON EX 8" ACP WATER MAIN IN EMBARCADERO PLACE
43. - ABANDON EXISTING FIRE HYDRANT
44. - ABANDON EXISTING 1" WATER SERVICE LATERAL
45. - CONSTRUCT 6" FIRE SERVICE LATERAL WITH DETECTOR CHECK
46. - CONSTRUCT 2" WATER SERVICE AND 2" METER.
47. - CONSTRUCT 12" GATE VALVE
48. - CONSTRUCT 8" FIRE SERVICE WITH UNDERGROUND DETECTOR CHECK
49. - PROTECT IN PLACE EXISTING WATER SERVICE LINE

## RECYCLED WATER NOTES

60. - CONSTRUCT 8" RECYCLED WATER LINE
61. - CONSTRUCT 2" WATER SERVICE AND 2" METER
62. - JOIN FUTURE MAIN LINE BY OTHERS

# OC DANA POINT HARBOR REVITALIZATION
# DRY BOAT STORAGE DECK ALTERNATIVE

COUNTY OF ORANGE
DANA POINT HABOR DRIVE
DANA POINT, CALIFORNIA

| | |
|---|---|
| DATE: | 04/17/2012 |
| PROJECT #: | 307.08 |
| SCALE: | 1" = 40' |

0

NORTH

SHEET #: 3

SEWER & WATER EXHIBIT

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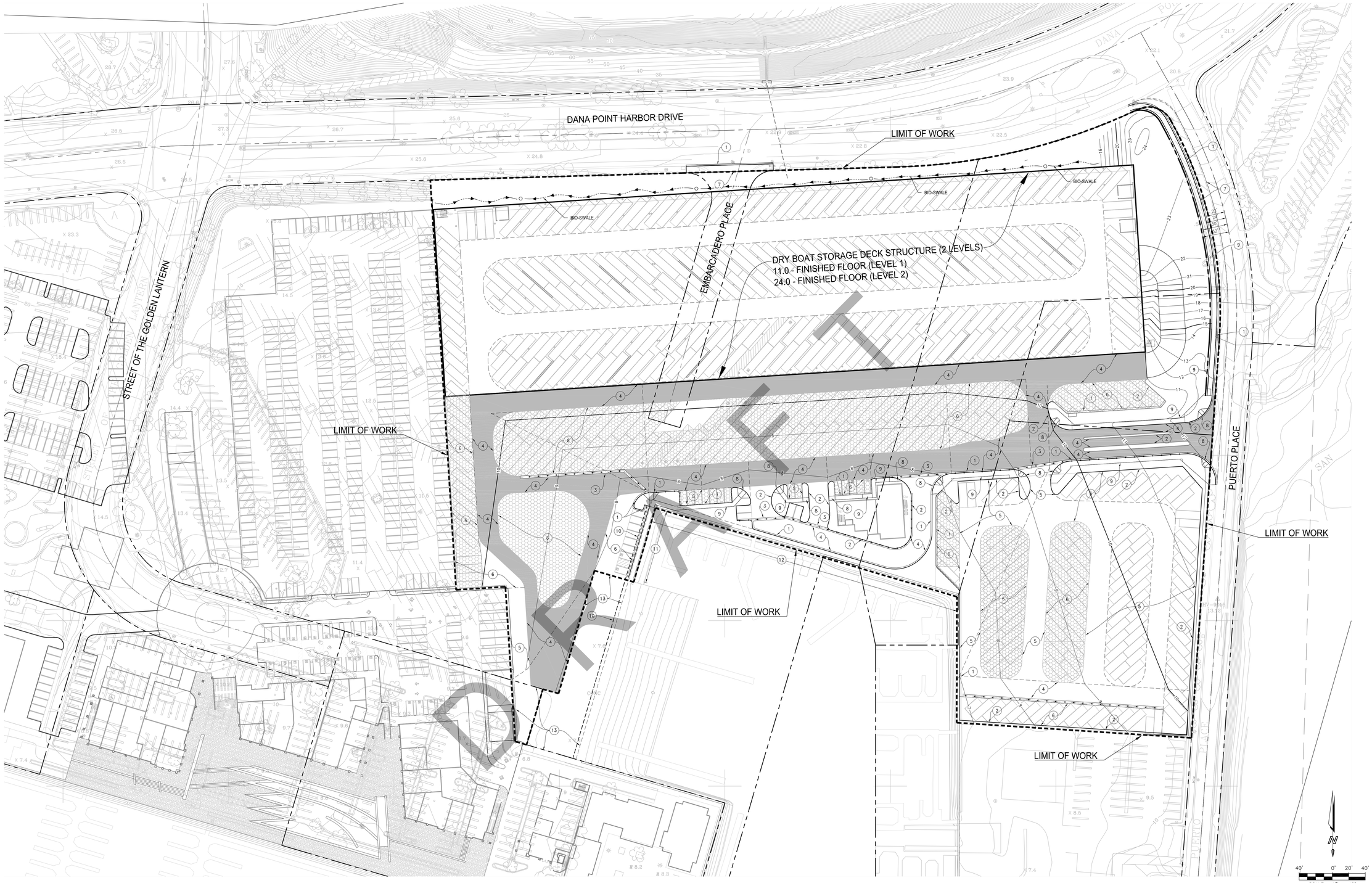


STREE NOTES

1. CONSTRUCT 6" CURB & GUTTER
2. CONSTRUCT 6" CURB ONLY
3. CONSTRUCT 4' WIDE / 6" THICK CONCRETE V-GUTTER
4. CONSTRUCT 6" THICK AC PAVEMENT OVER 12" THICK CMB - FIRE ACCESS
5. CONSTRUCT 4" THICK AC PAVEMENT OVER 8" THICK CMB - ON-SITE PVMT OTHER THAN FIRE ACCESS
6. CONSTRUCT POROUS PAVEMENT
7. CONSTRUCT 6" THICK AC PAVEMENT OVER 12" THICK CMB - PUERTO PLACE
8. CONSTRUCT 4" THICK P.C.C. CURB RAMP AND CURB RETURN SIDEWALK
9. CONSTRUCT 4" THICK P.C.C. SIDEWALK
10. PROTECT IN PLACE EXISTING TRENCH DRAIN AND WATER QUALITY FILTER
11. PROTECT IN PLACE EXISTING CURB & GUTTER, P.C.C. SIDEWALK, SEA WALL, AND METAL FENCE
12. PROTECT IN PLACE EXISTING SEA WALL AND METAL FENCE
13. PROTECT IN PLACE EXISTING P.C.C. CONRETE PAVING

# OC DANA POINT HARBOR REVITALIZATION
# DRY BOAT STORAGE DECK ALTERNATIVE

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE
DANA POINT, CALIFORNIA

| | |
|---|---|
| DATE: | 04/17/2012 |
| PROJECT #: | 307.08 |
| SCALE: | 1" = 40' |

0

NORTH

SHEET #: 4

## GRADING & PAVING EXHIBIT

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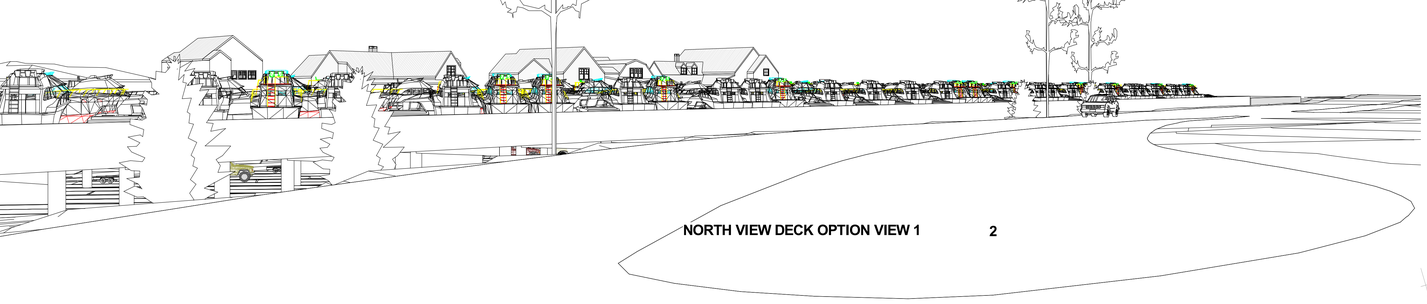
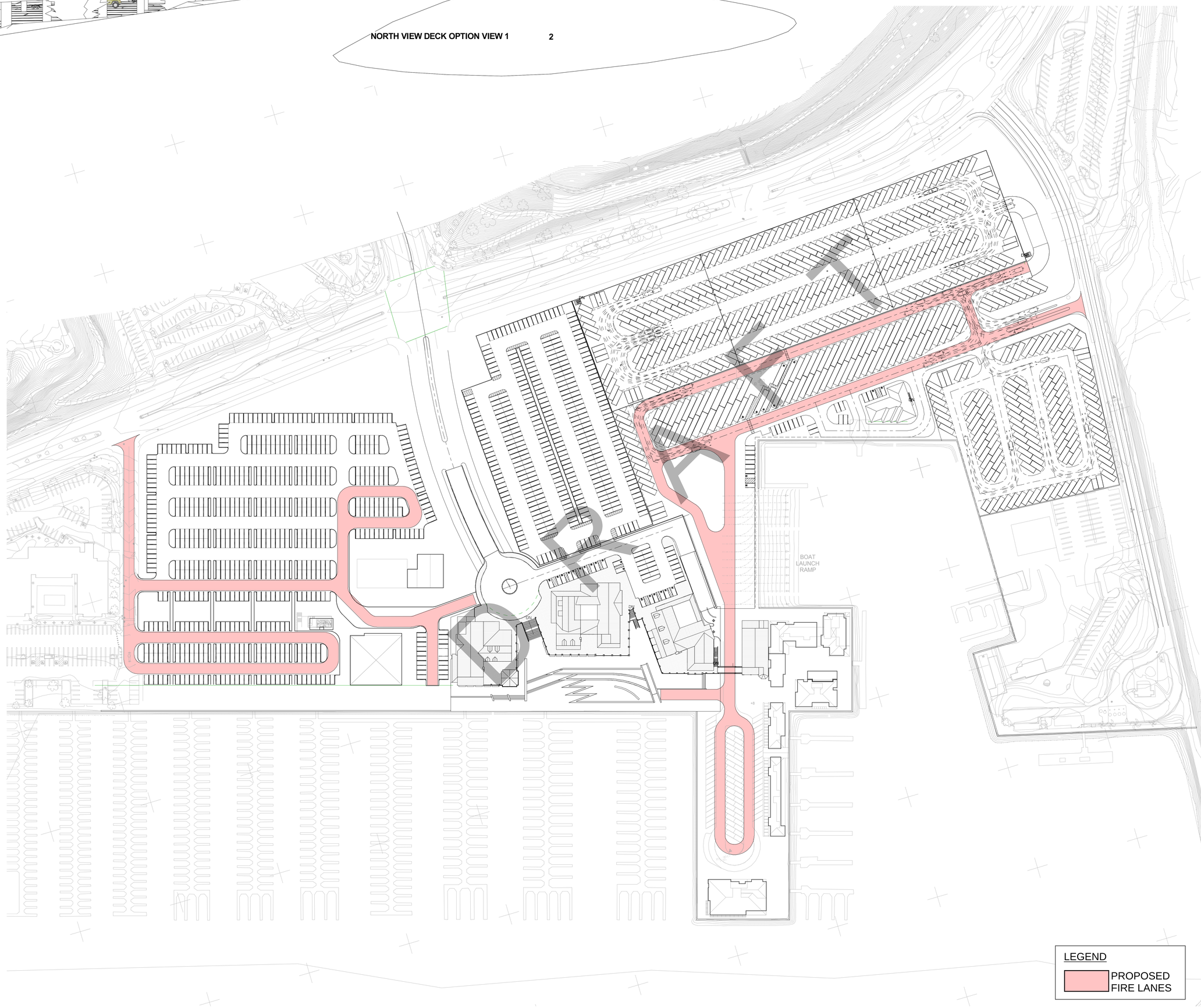


NORTH VIEW DECK OPTION VIEW 1 2




LEGEND

PROPOSED
FIRE LANES

# OC DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HABOR DRIVE
DANA POINT, CALIFORNIA

| | |
|---|---|
| DATE: | 04/17/12 |
| PROJECT #: | 2011-40140 |
| SCALE: | 1" = 60'-0" |

0

NORTH

SHEET #: A-1.01

## SITE PLAN DECK OPTION



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MVE Institutional, Inc.
1900 Main Street Suite 800
Irvine, California 92614
T 949.809.3380 F 949.809.3381
info@mve-institutional.com
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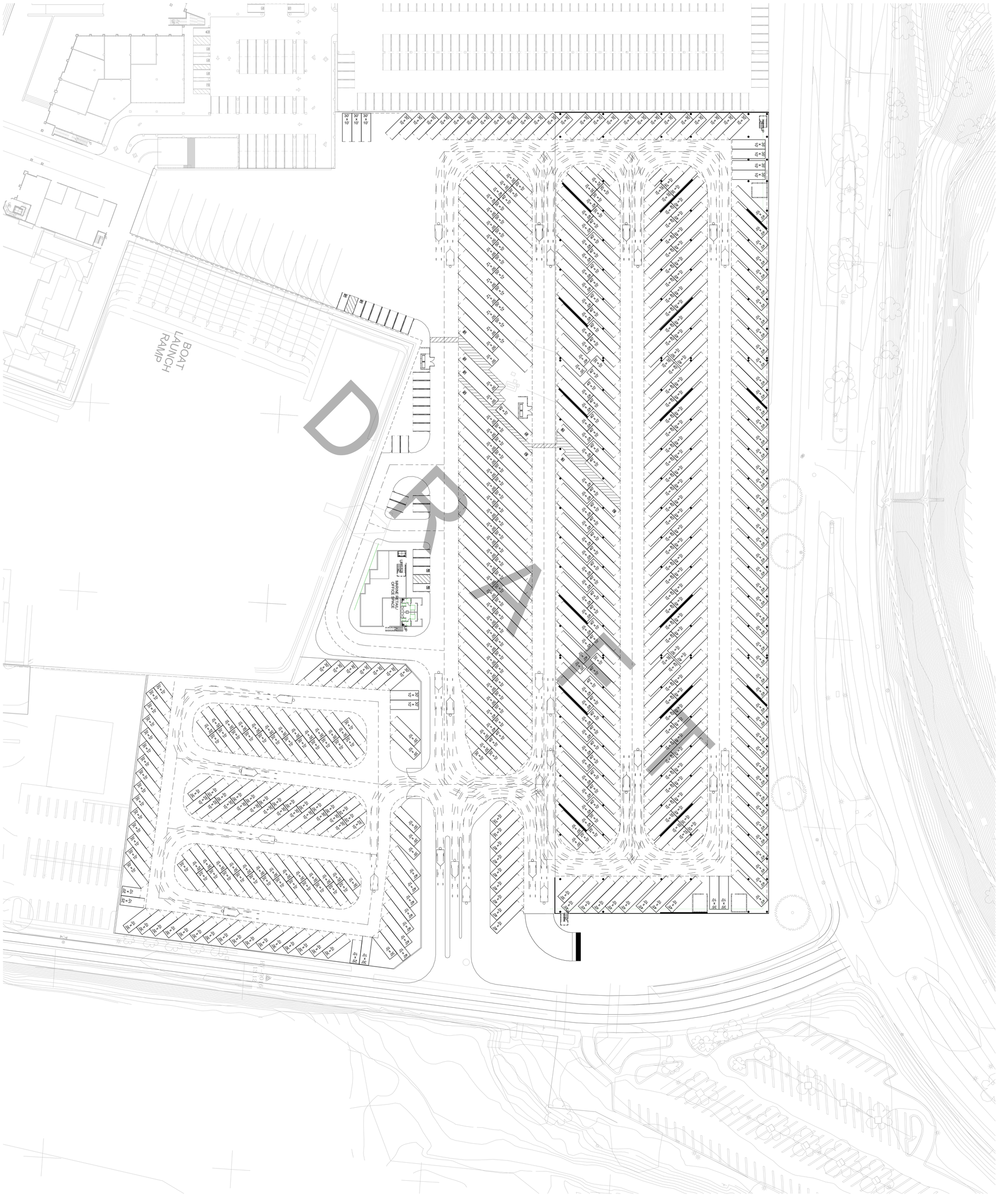


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1920 Main Street, Suite 600
Irvine, California 92614
T 949.553.9100 F 949.553.9291
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**SITE PLAN**

NORTH

SHEET #: A-1.00

DATE: 04/17/12

PROJECT #: Project Number

SCALE: 1" = 30'-0"

0

# DANA POINT HARBOR REVITALIZATION

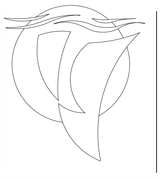
COUNTY OF ORANGE

DANA POINT HARBOR DRIVE

# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE

DANA POINT HARBOR DRIVE



| | |
|---|---|
| DATE: | 04/17/12 |
| PROJECT #: | Project Number |
| SCALE: | 3/64" = 1'-0" |
| NORTH | |
| SHEET #: | A-101 |

# FLOOR PLANS



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MVE Institutional Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.1313 F 949.553.8351
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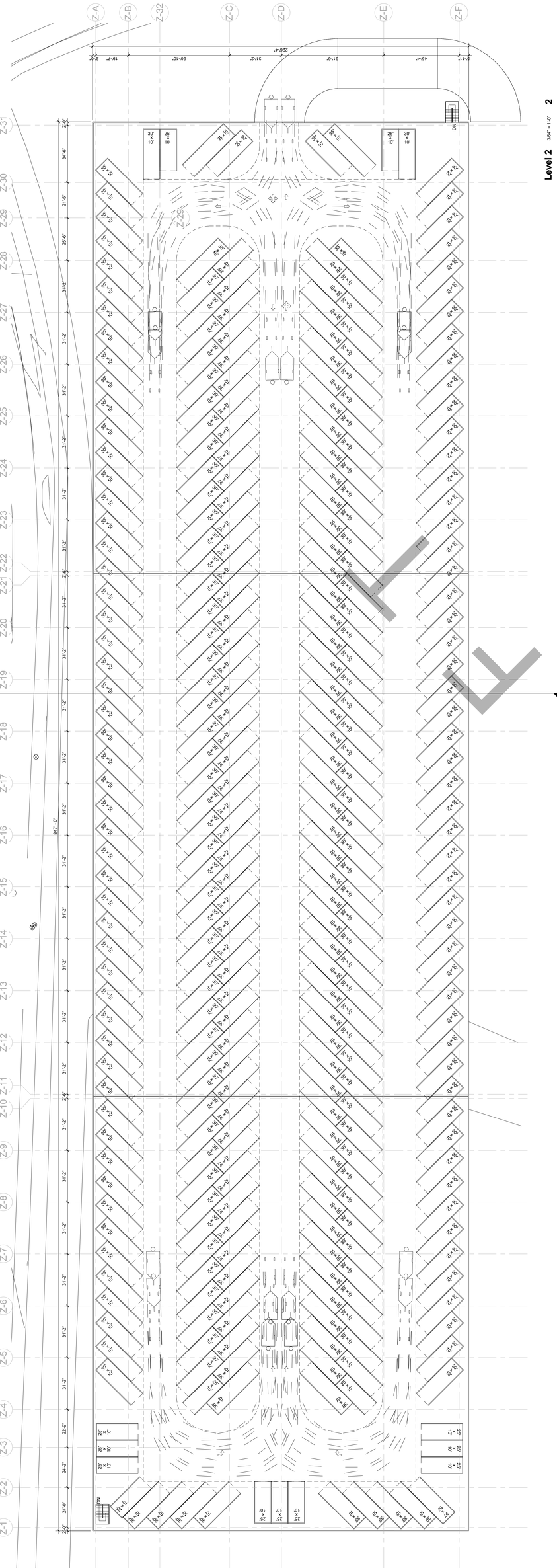
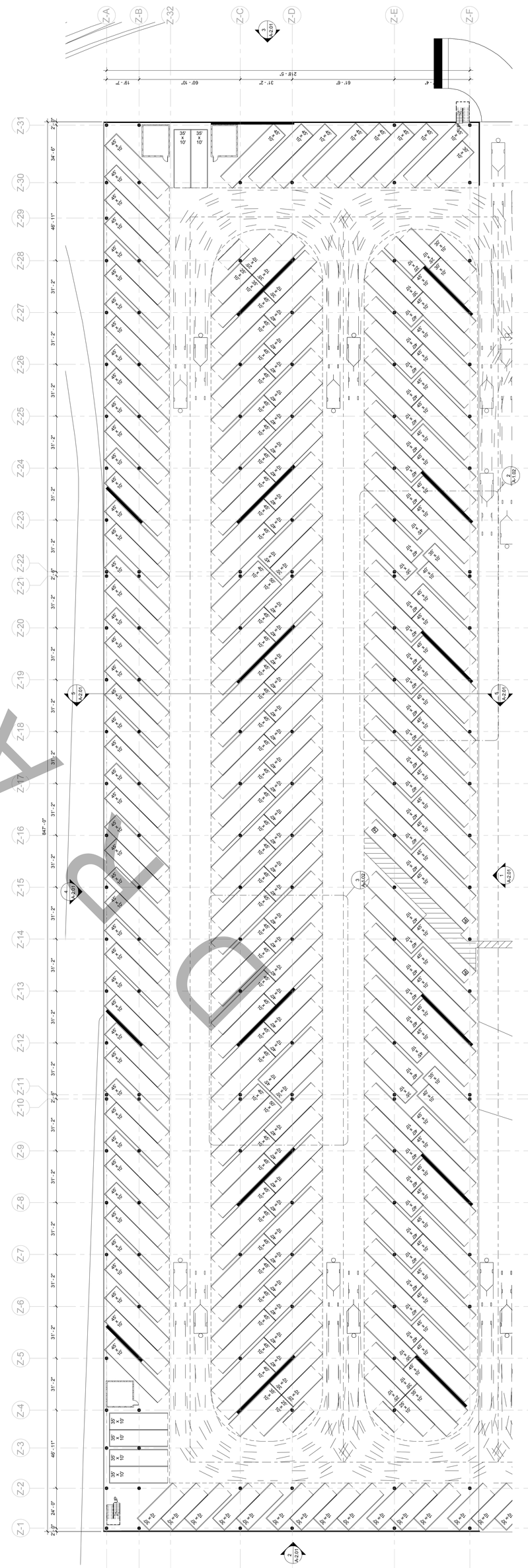



Level 2 3/64" = 1'-0" 2

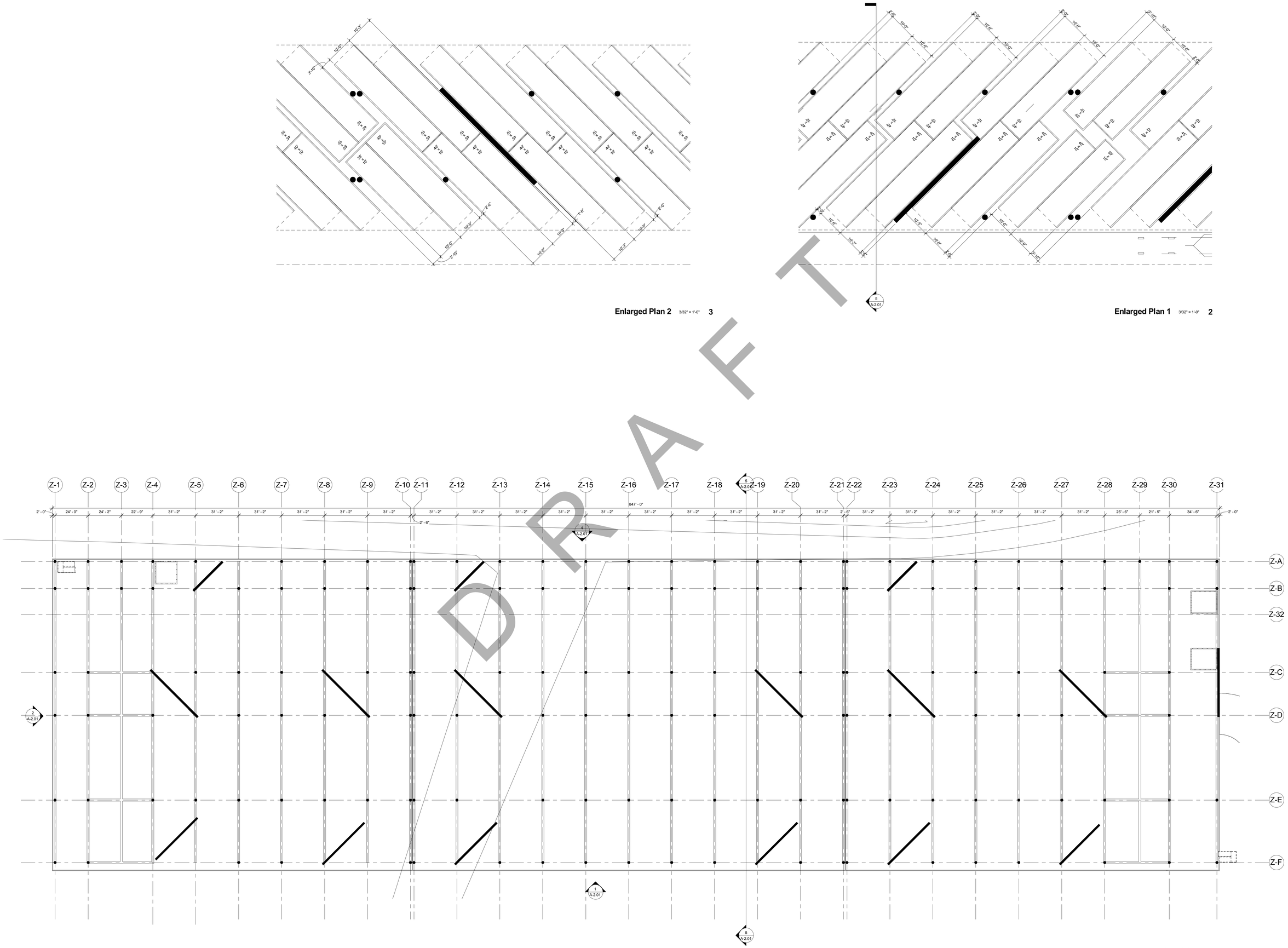



Level 1 3/64" = 1'-0" 1

Enlarged Plan 2 3/32" = 1'-0" 3




Enlarged Plan 1 3/32" = 1'-0" 2




Level 1 3/64" = 1'-0" 1



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

DATE: 04/17/12
PROJECT #: Project Number
SCALE: As indicated

NORTH
SHEET #: A-1.02

## CEILING AND ENLARGED PLAN



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Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.809.3300 F 949.809.3301
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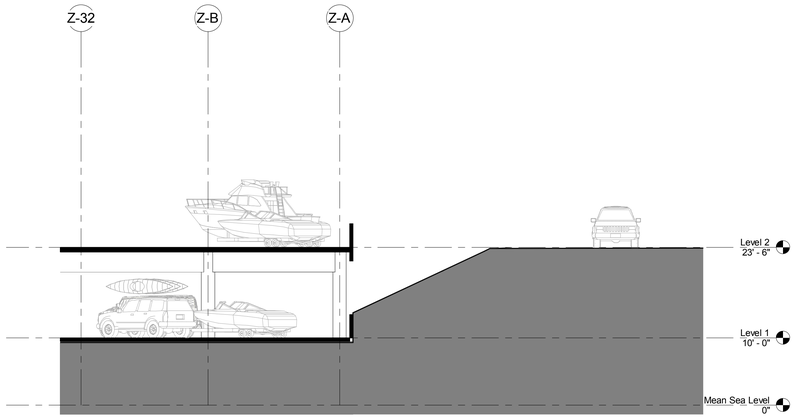
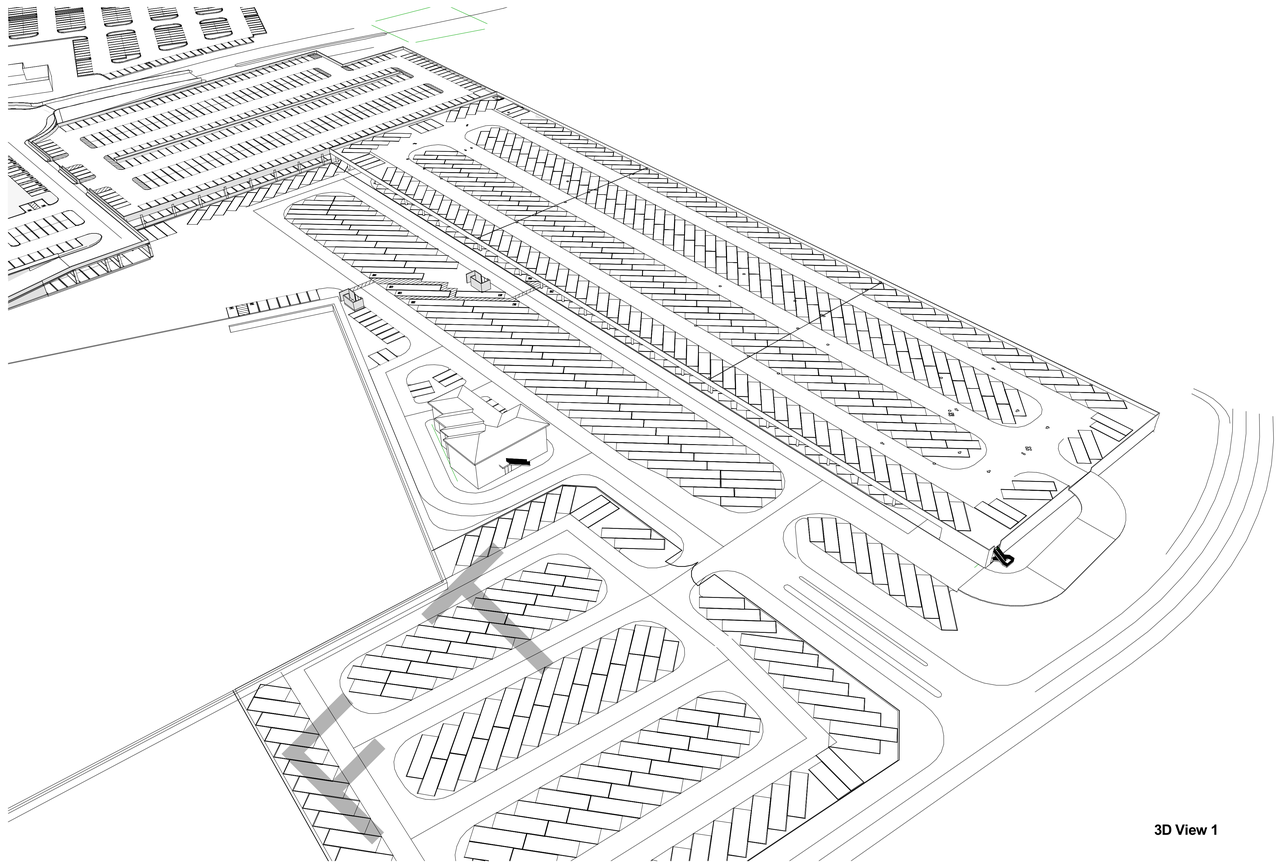
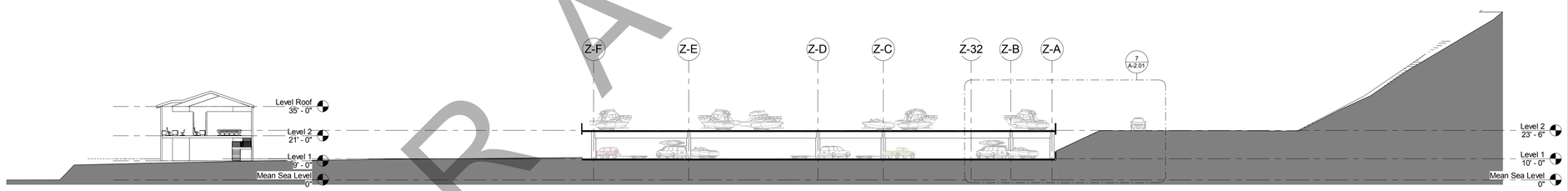


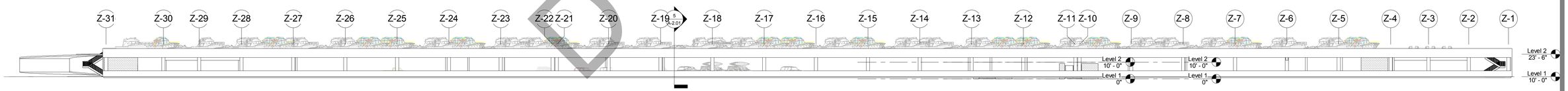

**Callout of Section 1** 1/8" = 1'-0" **7**



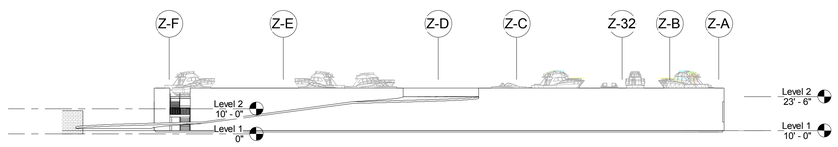
**3D View 1** **6**



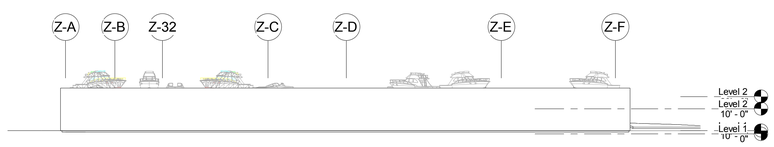

**Section 1** 3/64" = 1'-0" **5**



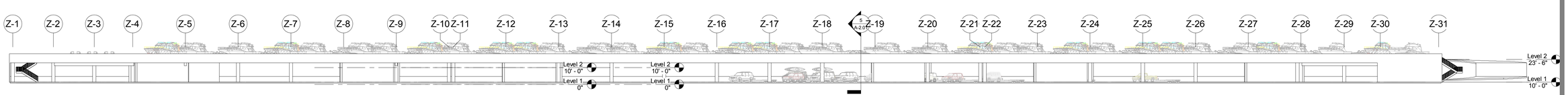

**North** 3/64" = 1'-0" **4**




**East** 3/64" = 1'-0" **3**




**West** 3/64" = 1'-0" **2**




**South** 3/64" = 1'-0" **1**



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

| | |
|---|---|
| DATE: | 04/17/12 |
| PROJECT #: | Project Number |
| SCALE: | As indicated |

0

NORTH

SHEET #: A-2.01

## ELEVATIONS SECTIONS



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MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.1370 F 949.553.1381
info@mve-institutional.com
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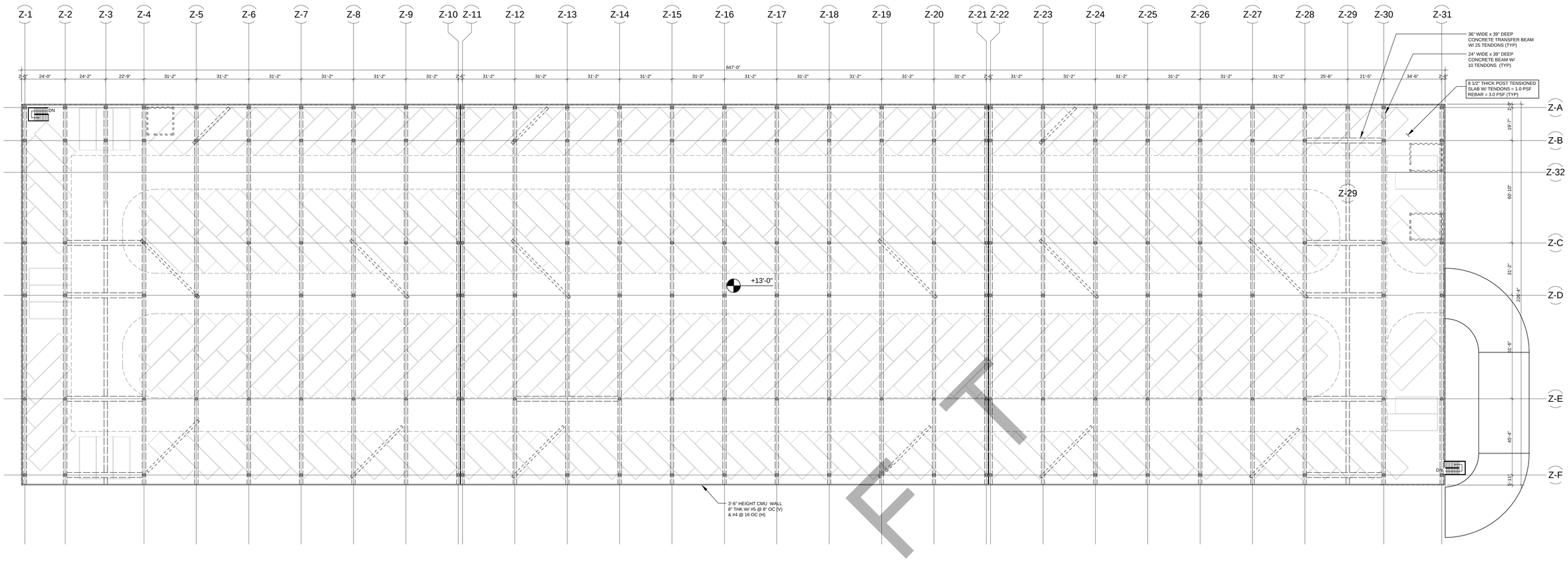
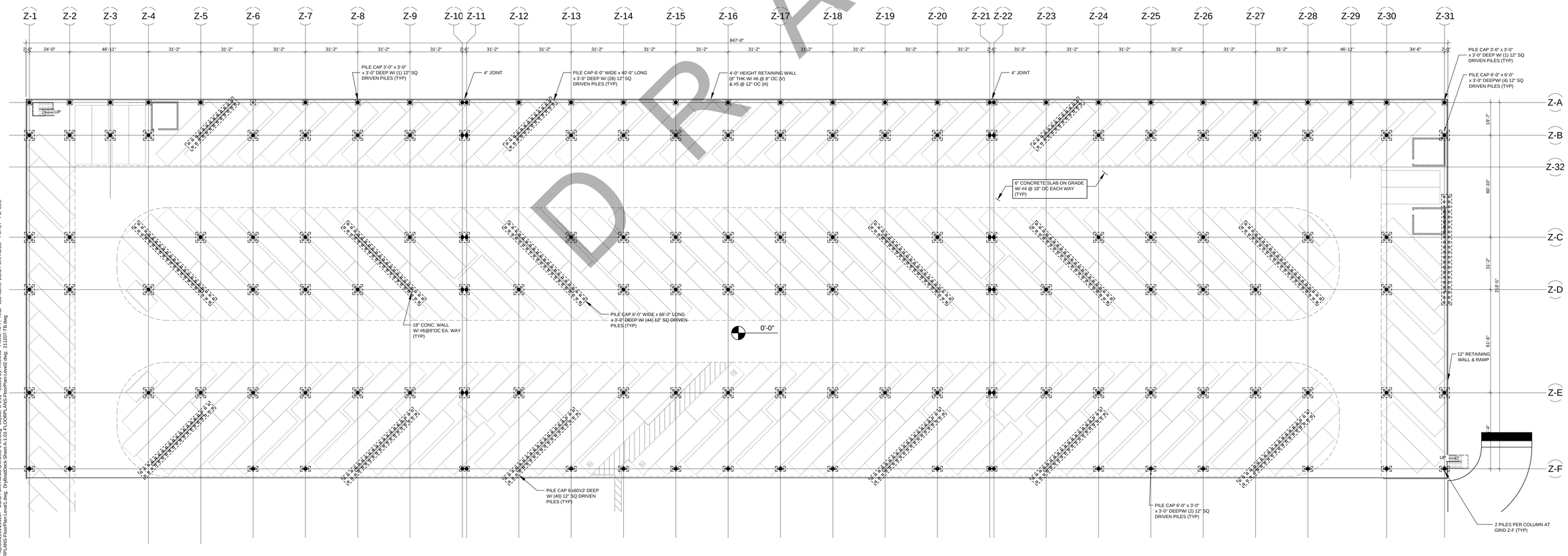



**Level 2 SLAB REINFORCING PLAN** 3/64" = 1'-0" **2**




**Level 1 FOUNDATION PLAN** 3/64" = 1'-0" **1**



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

No. S 3866
Exp. 3-31-14
STRUCTURAL
CALIFORNIA

kpff Consulting Engineers
18400 Von Karman Avenue, Suite 600
Irvine, California 92612-0527
(949) 252-1022 Fax (949) 252-8082

DATE: Issue Date
PROJECT #: Project Number
SCALE: 3/64" = 1'-0"
0
NORTH
SHEET #: S-1.01

## Foundation and Slab Reinforcing Plan



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
19100 Von Karman Avenue, Suite 800
Irvine, California 92612
T 949.553.3350 F 949.863.1581
info@mve-institutional.com
www.mve-architects.com

## FIXTURE SCHEDULE

| ITEM | FIXTURE | ROUGH-IN CONNECTIONS | | | | | | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| | | TRAP | WASTE | VENT | HOT WATER | COLD WATER | GAS | |
| TP 1 | TRAP PRIMER (MULTIPLE DRAIN) | -- | -- | -- | -- | 1/2" | -- | MIFAB NO. MR-500 TRAP PRIMER VALVE, BRASS BODY, ADJUSTABLE, COMPLETE WITH MI-DU DISTRIBUTION UNIT, 1/2" COPPER TYPE "L" PIPE TO EACH RECEPTOR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS, COMPLETE BEHIND ACCESS PANEL WITH SHUT-OFF VALVE. |
| FD 1 | FLOOR DRAIN (SEDIMENT BUCKET) | 3" | 3" | 1-1/2" | -- | -- | -- | ZURN NO. ZN-662-TS "EXTRA HEAVY DUTY DRAIN", 16" X 16", DUCO COATED CAST IRON BODY, COMPLETE WITH SQUARE NICKEL-BRONZE TOP SECURED WITH SLOTTED SCREWS, CLAMPING COLLAR, SEDIMENT BUCKET, AND P-TRAP WITH TRAP PRIMER CONNECTION. |
| RD 1 | ROOF DRAIN | SEE PLAN FOR SIZES | | | | | | ZURN NO. ZC-100-DR-C-R-84, CAST IRON BODY, COMPLETE WITH ADJUSTABLE EXTENSION SLEEVE, FLASHING COLLAR, STAINLESS STEEL GRAVEL STOP, CAST IRON DOME STRAINER, SUMP RECEIVER, AND UNDERDECK CLAMP. |

| ITEM | FIXTURE | ROUGH-IN CONNECTIONS | | | | | | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| | | TRAP | WASTE | VENT | HOT WATER | COLD WATER | GAS | |
| OD 1 | OVERFLOW DRAIN | SEE PLAN FOR SIZES | | | | | | ZURN NO. ZC-100-DR-89, CAST IRON BODY, COMPLETE WITH CAST IRON DOME STRAINER, UNDERDECK CLAMP, AND 2" HIGH WATER DAM. |
| HB 1 | HOSE BIBB (WALL) | -- | -- | -- | -- | -- | 3/4" | -- ACORN NO. 8121-CP "BENT NOSE WITH FLANGE" HOSE BIBB, WALL MOUNTED, CHROME-PLATED POLISHED, WITH INTEGRAL VACUUM BREAKER, LOOSE KEY OPERATION. |

## LEGEND

| SYMBOL | ABBREVIATION | DESCRIPTION |
|---|---|---|
| —— —— —— | S OR W | SOIL OR WASTE BELOW FLOOR OR GRADE |
| —— SD —— | SD | STORM DRAIN ABOVE FLOOR |
| —— —— SD —— —— | SD | STORM DRAIN BELOW FLOOR OR GRADE |
| —— OD —— | OD | OVERFLOW DRAIN ABOVE FLOOR |
| - - - - - - - - - - - - - - - - | V | SANITARY VENT |
| —— -- —— | CW | COLD WATER |
| —— TP —— | TP | TRAP PRIMER |
| —— F —— | F | FIRE LINE |
| —— AS —— | AS | AUTOMATIC SPRINKLER LINE |
| —— | | DIRECTION OF FLOW |
| | SOV | SHUT-OFF VALVE |
| | FCO | FLOOR CLEANOUT |
| | WCO | WALL CLEANOUT |
| | | RISER UP |
| | | RISER DOWN |
| | ABV | ABOVE |
| | BEL | BELOW |
| | CLG | CEILING |
| | CONT | CONTINUATION |
| | COTG | CLEANOUT TO GRADE |
| | DN | DOWN |
| | EXIST | EXISTING |
| | FLR | FLOOR |
| | FFE | FINISH FLOOR ELEVATION |
| | I.E. | INVERT ELEVATION |
| | POC | POINT OF CONNECTION |
| | PLCS | PLACES |
| | SLVE | SLEEVE |
| | VTR | VENT THRU ROOF |
| | YB | YARD BOX |



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

BP Associates
Consulting Engineers
3 Peters Canyon, Suite 100
Irvine, California 92606
Telephone (949) 417-3900
Fax (949) 417-3908

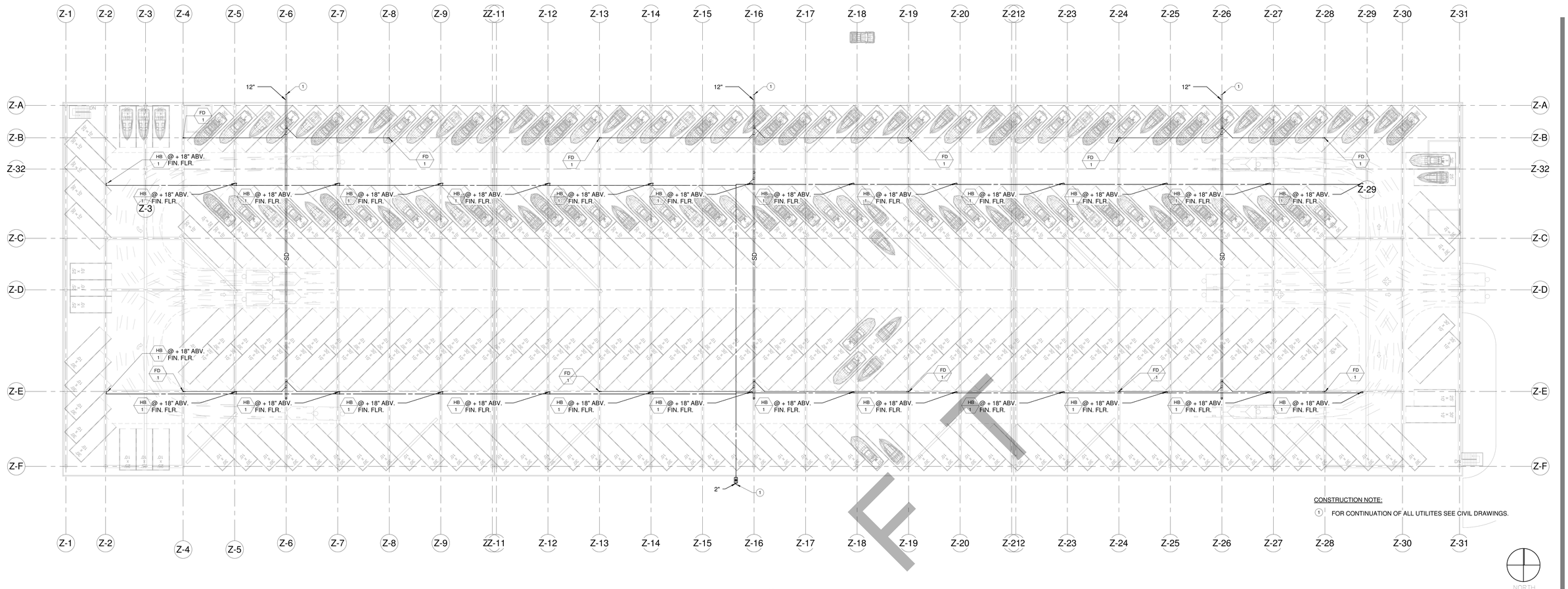
DATE: Issue Date
PROJECT #: Project Number
SCALE:
0
NORTH
SHEET #: P-0.01

## PLUMB. LEG., SCHEDULES, AND GEN. NOTES



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.509.3350 F 949.509.3361
info@mve-institutional.com
www.mve-architects.com

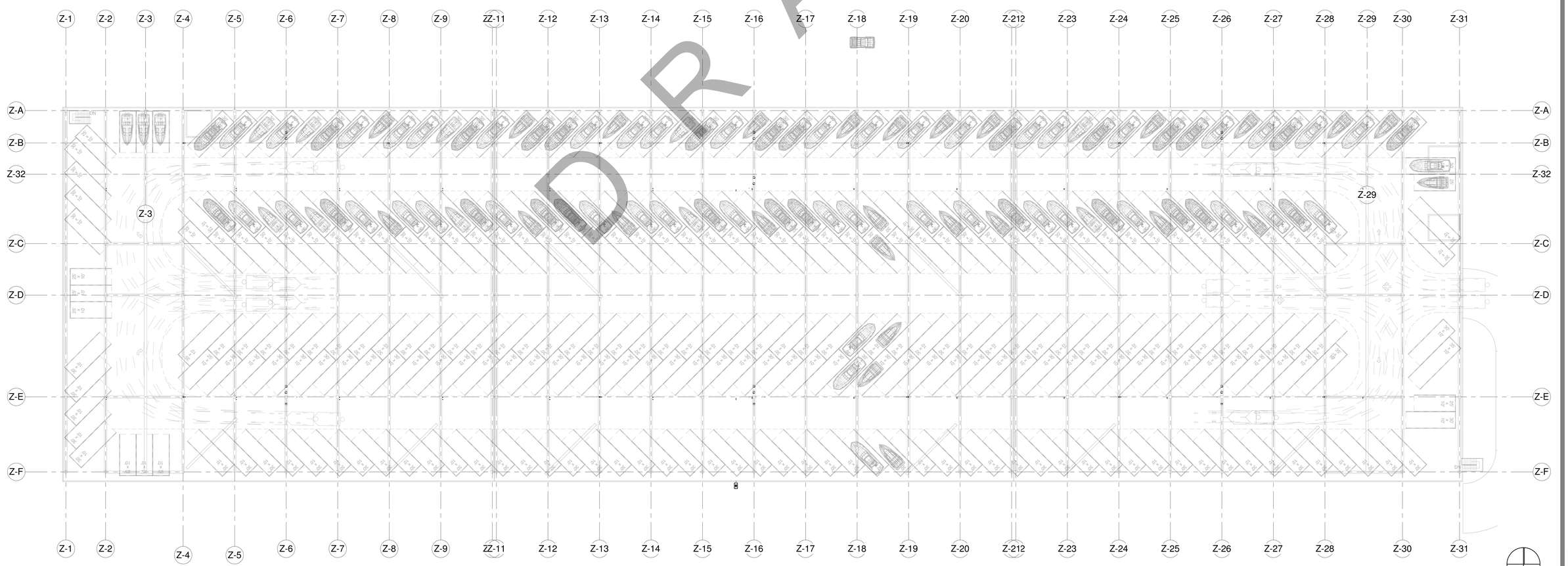



CONSTRUCTION NOTE:

1 FOR CONTINUATION OF ALL UTILITES SEE CIVIL DRAWINGS.

NORTH

**Level 2** SCALE 3/64" = 1'-0" **2**




NORTH

**Level 1** SCALE 3/64" = 1'-0" **1**



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

B&P Associates
Consulting Engineers
3 Peters Canyon, Suite 100
Irvine, California 92606
Telephone (949) 417-3900
Fax (949) 417-3908

DATE: Issue Date
PROJECT #: Project Number
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0

NORTH

SHEET #: P-2.01

## PLUMING FLOOR PLANS



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.809.3380 F 949.809.3381
info@mve-institutional.com
www.mve-architects.com

## SECURITY ALARM SYSTEM SYMBOLS

- SACP — SECURITY ALARM CONTROL PANEL – SEE SPECIFICATIONS.
- SPS — SECURITY SYSTEM POWER SUPPLY – SEE SPECIFICATIONS.
- (ID) — SECURITY ALARM PASSIVE INFRARED MOTION SENSOR – SEE SPECIFICATIONS.
- (DT) — SECURITY ALARM DUAL TECHNOLOGY MOTION SENSOR – SEE SPECIFICATIONS.
- (US) — SECURITY ALARM ULTRASONIC MOTION SENSOR – SEE SPECIFICATIONS.
- (DC) — SECURITY ALARM DOOR CONTACT – SEE SPECIFICATIONS.
- (PB) — SECURITY ALARM PANIC BUTTON – SEE SPECIFICATIONS.
- (KP) — SECURITY ALARM KEY PAD – SEE SPECIFICATIONS.
- (GB) — SECURITY ALARM GLASS BREAK INDICATOR – SEE SPECIFICATIONS.
- —— SA —— SECURITY ALARM SYSTEM BRANCH CIRCUIT PER SECURITY ALARM RISER DIAGRAM AND/OR SPECIFICATIONS.

## ACCESS CONTROL SYSTEM SYMBOLS

- ACCP — ACCESS CONTROL PANEL – SEE SPECIFICATIONS.
- APS — ACCESS CONTROL SYSTEM POWER SUPPLY – SEE SPECIFICATIONS.
- LPS — ACCESS CONTROL SYSTEM LOCK POWER SUPPLY – SEE SPECIFICATIONS.
- (KS) — ACCESS CONTROL KEY SWITCH – SEE SPECIFICATIONS.
- (LA) — ACCESS CONTROL LOCAL ALARM SOUNDER – SEE SPECIFICATIONS.
- (PR) — ACCESS CONTROL PROXIMITY READER – SEE SPECIFICATIONS.
- (CR) — ACCESS CONTROL CARD READER – SEE SPECIFICATIONS.
- (KP) — ACCESS CONTROL KEY PAD – SEE SPECIFICATIONS.
- (ES) — ACCESS CONTROL REQUEST TO EXIT SENSOR – SEE SPECIFICATIONS.
- —— AC —— ACCESS CONTROL SYSTEM BRANCH CIRCUIT PER ACCESS CONTROL RISER DIAGRAM AND/OR SPECIFICATIONS.

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| 4S/DP | 4" SQUARE BY 2–1/8" DEEP BOX | LF, L.F. | LINEAR FEET |
| ADA | AMERICAN WITH DISABILITIES ACT | LTG, LTS | LIGHTING |
| A.F.F. | ABOVE FINISH FLOOR | LPS | LOW PRESSURE SODIUM |
| A.F.G. | ABOVE FINISH GRADE | MAX. | MAXIMUM |
| AWG | AMERICAN WIRE GAUGE | MDF | MAIN DISTRIBUTION FRAME |
| AMP, A | AMPERE | MOCP | MAXIMUM OVERCURRENT PROTECTION |
| A.I.C. | AMPERES INTERRUPTING CAPACITY (SYMMETRICAL) | MCB | MAIN CIRCUIT BREAKER |
| AF/AT | AMP FRAME, AMP TRIP | MLO | MAIN LUGS ONLY |
| AHJ | AUTHORITY HAVING JURISDICTION | M.C. | MECHANICAL CONTRACTOR |
| AS/AF | AMP SWITCH, AMP FUSE | M | METER |
| ATS | AUTOMATIC TRANSFER SWITCH | M/M | METER MAIN |
| AVG | AVERAGE | MV | MERCURY VAPOR |
| BDF | BUILDING DISTRIBUTION FRAME | MH | METAL HALIDE |
| BR | BRANCH | MIN. | MINIMUM |
| BLDG | BUILDING | MCA | MINIMUM CIRCUIT AMPS |
| CBC | CALIFORNIA BUILDING CODE | MCC | MOTOR CONTROL CENTER |
| CEC | CALIFORNIA ELECTRICAL CODE | MCM | THOUSAND CIRCULAR MILS |
| CIRC., CKT. | CIRCUIT | MCP | MOTOR CIRCUIT PROTECTOR |
| CB | CIRCUIT BREAKER | MFR. | MANUFACTURER |
| CSFD | COMBINATION SMOKE FIRE DAMPER | MTD | MOUNTED |
| C | CONDUIT | MW | MICROWAVE |
| C.O. | CONDUIT ONLY, COMPLETE WITH PULLSTRING | NATS | NON AUTOMATIC DISCONNECT |
| CONN | CONNECTED | NEC | NATIONAL ELECTRICAL CODE |
| CPT | CONTROL POWER TRANSFORMER | NEMA | NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION |
| CLCB | CURRENT LIMITING CIRCUIT BREAKER | NC | NORMALLY CLOSED |
| | | NO | NORMALLY OPENED |
| CLF | CURRENT LIMITING FUSE | NF | NON–FUSED |
| CT | CURRENT TRANSFORMER | NIC | NOT IN CONTRACT |
| (D) | EXISTING DEVICE TO BE DEMOLISHED. | N.T.S. | NOT TO SCALE |
| | | NL | NIGHT LIGHT |
| DIA | DIAMETER | NO. or # | NUMBER |
| DISC | DISCONNECT | OFCI | OWNER FURNISHED, CONTRACTOR INSTALLED |
| DIST | DISTRIBUTION | | |
| E.C. | ELECTRICAL CONTRACTOR | %Z | PERCENT IMPEDANCE |
| EMS | ENERGY MANAGEMENT CONTROL SYSTEM | PH. or ø | PHASE |
| | | PC | PHOTOCELL |
| EMT | ELECTRICAL METALLIC TUBING | P.C. | PLUMBING CONTRACTOR |
| ENT | ELECTRICAL NON–METALLIC TUBING | P | POLE |
| EWC | ELECTRIC WATER COOLER | PVC | POLY VINYL CHLORIDE |
| E.P.O. | EMERGENCY POWER OFF | PDU | POWER DISTRIBUTION UNIT |
| E–O–L | END–OF–LINE CIRCUIT TERMINATOR | PRIMARY | OVER 600 VOLTS |
| EF | EXHAUST FAN | PROVIDE | FURNISH, INSTALL AND CONNECT |
| E/G | EQUIPMENT GROUND (GREEN) | | |
| (E) | EXISTING DEVICE TO REMAIN | PT | POTENTIAL TRANSFORMER |
| EP | EXPLOSION PROOF | PA | PUBLIC ADDRESS |
| (ER) | EXISTING DEVICE TO BE RELOCATED | (R) | DENOTES RELOCATED DEVICE LOCATION. |
| FT or ' | FEET | REC, RECEPT | RECEPTACLE |
| FA | FIRE ALARM | REF | REFRIGERATOR |
| FLA | FULL LOAD AMPS | RGS | RIGID GALVANIZED STEEL |
| GRD | GROUND | RMS | ROOT MEAN SQUARE |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER | SCC | SHORT CIRCUIT CURRENT |
| | | SCS | STRUCTURED CABLING SYSTEM |
| GFP | GROUND FAULT PROTECTION | SFD | SMOKE FIRE DAMPER |
| GEC | GROUNDING ELECTRODE CONDUCTOR | SECONDARY | 600 VOLTS AND LESS |
| | | SMACNA | SHEET METAL & AIR COND. CONTRACTORS' NAT'L ASSOC. |
| HACR | HEATING AIR CONDITIONING REFRIGERATION | SQ. | SQUARE |
| HOA | HAND–OFF–AUTO | TC | TIMECLOCK |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING | TEL/DATA | TELEPHONE AND DATA |
| | | TV | TELEVISION |
| H.,W.,D.,L. | HEIGHT, WIDTH, DEPTH, LENGTH | T.V.S.S. | TRANSIENT VOLTAGE SURGE SUPPRESSION |
| HID | HIGH INTENSITY DISCHARGE | | |
| HP | HORSEPOWER | TYP | TYPICAL |
| HPS | HIGH PRESSURE SODIUM | U.G.P.S. | UNDERGROUND PULL SECTION |
| IN. or '' | INCHES | U.O.N. | UNLESS OTHERWISE NOTED |
| I/G | ISOLATED GROUND | U.P.S. | UNINTERRUPTABLE POWER SYSTEM |
| IBC | INTERNATIONAL BUILDING CODE | | |
| IDF | INTERMEDIATE DISTRIBUTION FRAME | VAV | VARIABLE AIR VOLUME |
| JBOX | JUNCTION BOX | V | VOLTS |
| K | DEGREE KELVIN | VA | VOLT AMPERES |
| KCMIL | THOUSAND CIRCULAR MILS | VD | VOLTAGE DROP |
| KVA | KILOVOLT AMPERES | WP | WEATHERPROOF |
| KW | KILOWATT | W | WIRE |
| KWH | KILOWATT HOUR | XFMR | TRANSFORMER |
| LCL | LONG CONTINUOUS LOAD | | |

## PROJECT SPECIFIC SYMBOLS

## REQUIRED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE REQUIRED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS AND SHOULD BE INCLUDED AS PART OF THE BASE BID. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

## ALLOWED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE ALLOWED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

## DEDUCTIVE/ADDITIVE ALTERNATE PRICING

IN ADDITION TO ANY DEDUCTIVE OR ADDITIVE LINE ITEM PRICING CALLED FOR ON THE DRAWING OR IN THE SPECIFICATIONS, CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM DEDUCTIVE/ADDITIVE ALTERNATE PRICING FOR EACH OF THE FOLLOWING ITEM(S):

NONE

## FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

## SIGNAL SYSTEM SYMBOLS

- B — WALL MOUNTED CLOCK, FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED CLOCK. "D" INDICATES DIGITAL CLOCK, "NO LETTER" INDICATES ANALOG CLOCK. REFER TO SPECIFICATIONS.
- —— C —— CONCEALED CLOCK CONDUIT RUN 1/2" CONDUIT, OR AS NOTED, WITH CONDUCTORS PER SPECIFICATIONS.
- (TV) — TV OUTLET, WALL MOUNTED. STUB A 3/4"C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING.
- (TV) — TV OUTLET FLUSH CEILING MOUNTED.
- —— TV —— CONCEALED TELEVISION CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.
- (M) — MICROPHONE OUTLET, WALL MOUNTED. PROVIDE 3/4" C.O. (WITH PULL ROPE) UP TO 6" ABOVE ACCESSIBLE CEILING SPACE. BUSH ENDS.
- (M) — MICROPHONE OUTLET, FLUSH CEILING MOUNTED.
- —— M —— CONCEALED MICROPHONE CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.
- (S)V — SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- (S)V — SURFACE MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- (S)V — FLUSH WALL MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- (S)V — CEILING FLUSH MOUNTED SPEAKER , "V" INDICATES VOLUME CONTROL.
- (V) — VOLUME CONTROL, WALL MOUNTED.
- —— S —— CONCEALED SPEAKER CONDUIT RUN 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS – REFER TO SPECIFICATIONS.

## ANNOTATIONS

- A — PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.
- AC 2 — MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.
- 3 / E–1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E–1" INDICATES SHEET NUMBER.
- 2 — PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
- 1 — REVISION REFERENCE.
- WYE CONFIGURATION — DELTA CONFIGURATION — GROUND

## CCTV SYSTEM SYMBOLS

- CCTV — CLOSED CIRCUIT TELEVISION CONTROL PANEL – SEE SPECIFICATIONS.
- CPS — CLOSED CIRCUIT TELEVISION POWER SUPPLY – SEE SPECIFICATIONS.
- CCTV FIXED POSITION CAMERA – SEE SPECIFICATIONS.
- CCTV PAN/TILT CAMERA – SEE SPECIFICATIONS.
- (VA) — CCTV VIDEO AMPLIFIER – SEE SPECIFICATIONS.
- (VM) — CCTV VIDEO MONITOR – SEE SPECIFICATIONS.
- —— CC —— CCTV SYSTEM BRANCH CIRCUIT PER CCTV SYSTEM RISER DIAGRAM AND/OR SPECIFICATIONS.

## TELEPHONE/DATA SYMBOLS

- TELEPHONE OUTLET BOX, WALL MOUNTED. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
  - "W" = WALL MOUNTED PHONE
  - "P" = PUBLIC (PAY) PHONE. VERIFY ALL REQUIREMENTS WITH THE TELEPHONE UTILITY COMPANY. PROVIDE 1"C.O. (MIN) TO THE MAIN TELEPHONE BACKBOARD. MOUNTING HEIGHT AS REQUIRED.
- DATA OUTLET BOX, WALL MOUNTED. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED. STUB A 1" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- TELEPHONE OUTLET BOX, FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DATA OUTLET BOX FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET BOX FLUSH MOUNTED IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- TELEPHONE OUTLET BOX, WALL MOUNTED 6" ABOVE COUNTER OR SPLASH. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- DATA OUTLET BOX, WALL MOUNTED 6" ABOVE COUNTER OR SPLASH. STUB A 3/4"C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED 6" ABOVE COUNTER OR SPLASH. STUB A 1" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
- COMBINATION TELEPHONE AND DATA OUTLET BOX MOUNTED IN ACCESSIBLE CEILING SPACE OR IN FLOOR BOX PER PLAN FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH–IN – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION TELEPHONE AND DATA OUTLET, WALL MOUNTED AT +18" A.F.F. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. PROVIDE THE FOLLOWING:
  - IN A NON–RATED INSULATED WALL, OR NON–RATED UNINSULATED WALL, PROVIDE A 2–GANG MUD RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B–LINE OR RAYCO) WITH (2) 1–1/2"C.O. WITH PULL STRING TO ACCESSIBLE CEILING. PROVIDE 1–1/2" BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
  - IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1–1/4"C.O. AND (1) 4S/DP BOX WITH (1) 1–1/4"C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1–1/4" BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT (EQUAL BY B–LINE OR RAYCO). UTILIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
- —— T —— CONCEALED TELEPHONE/DATA CONDUIT RUN, 3/4" CONDUIT ONLY (MIN). SEE TABLE FOR CONDUIT SIZE VARIATIONS.
  - T1 = 1" C.O. T2 = 1–1/4" C.O. T3 = 1–1/2" C.O.
  - T4 = 2" C.O. T5 = (2) 3/4" C.O.
- FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

## LIGHTING / LIGHTING CONTROL SYMBOLS

SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION.

- 1a — LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "1") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "a") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES).
- (x) — WALL MOUNTED DIMMER. SEE SINGE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS – SEE SPECIFICATIONS.
- (OS)H y,z — WALL MOUNTED OCCUPANCY SENSOR – SEE SPECIFICATIONS FOR MORE INFORMATION. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. ADJACENT UPPER CASE LETTER ("H") INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY–CONTACT CLOSURE.
- (OS)H y,z — 1–WAY / 2–WAY DIRECTIONAL CEILING MOUNTED OCCUPANCY SENSOR – SEE SPECIFICATIONS FOR MORE INFORMATION. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS / DIMMING CIRCUITS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. ADJACENT UPPER CASE LETTER ("H") INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY–CONTACT CLOSURE.
- (WS)H y,(z) — 1–WAY / 2–WAY DIRECTIONAL CEILING MOUNTED NETWORKED OCCUPANCY SENSOR – SEE SPECIFICATIONS FOR MORE INFORMATION. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF RELAYS / DIMMING CIRCUITS REQUIRED – SEE CONTROL CONFIGURATIONS BELOW FOR MORE INFORMATION. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. ADJACENT UPPER CASE LETTER ("H") INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY–CONTACT CLOSURE.

CONTROL CONFIGURATIONS:

- y,z — "y,z" INDICATES THAT SWITCH LEG "y" AND "z" TO BE CONFIGURED AS "AUTOMATIC ON / AUTOMATIC OFF" AND BE CONTROLLED (SWITCHED OR STEP DIMMED) BY THE ASSOCIATED WALL MOUNTED SENSOR INTEGRAL SWITCHES OR THE ASSOCIATED CEILING SENSOR REMOTE SWITCHES ON THE WALL.
- y,(z) — "y,(z)" INDICATES THAT SWITCH LEG "y" TO BE CONFIGURED AS "AUTOMATIC ON / AUTOMATIC OFF" AND BE CONTROLLED (SWITCHED OR STEP DIMMED) BY THE WALL MOUNTED SENSOR INTEGRAL SWITCH OR THE ASSOCIATED CEILING SENSOR REMOTE SWITCH ON THE WALL. SWITCH LEG "z" TO BE CONFIGURED AS "MANUAL ON / AUTOMATIC OFF" AND BE CONTROLLED (SWITCHED OR STEP DIMMED) BY THE ASSOCIATED WALL MOUNTED SENSOR INTEGRAL SWITCH OR THE CEILING SENSOR REMOTE SWITCH ON THE WALL.
- (y,z) — "(y,z)" INDICATES THAT BOTH SWITCH LEGS "y" AND "z" TO BE CONFIGURED IN A "MANUAL ON / AUTO OFF" (VACANCY SENSOR) AND BE CONTROLLED (SWITCHED OR STEP DIMMED) BY THE ASSOCIATED WALL MOUNTED SENSOR INTEGRAL SWITCHES OR THE ASSOCIATED CEILING SENSOR REMOTE SWITCHES ON THE WALL.
- y,(y) — "y,(y)" INDICATES THAT SWITCH LEG "y" TO BE CONFIGURED IN A "AUTO ON 50% / MANUAL ON 100% / AUTO OFF" AND BE CONTROLLED (CONTINUOUSLY DIMMED) BY THE ASSOCIATED CEILING SENSOR REMOTE SWITCH ON THE WALL.

- (x)y,z — LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL "ON/OFF SWITCHING" AND "DIMMING" (STEPPED / CONTINUOUS) CONTROL OF LIGHTING WHICH IS CONTROLLED BY CEILING MOUNTED OCCUPANCY SENSORS. ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/FIXTURE TYPE. UPPER CASE PREFIX "K" INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER.
- (50)z+ — AUTOMATIC SWITCHING / STEP–DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTERS "z+" INDICATES SWITCH LEG(S) CONTROLLED. ADJACENT "+" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR.
- (50)z+ — AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTERS "z+" INDICATES SWITCH LEG(S) CONTROLLED. ADJACENT "+" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR.
- —— LOW–VOLTAGE WIRING BETWEEN OCCUPANCY SENSORS, VACANCY SENSORS, DAY–LIGHTING CONTROLS, LOW–VOLTAGE SWITCHES, AND SWITCHPACKS. CONDUCTOR TYPE AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS AND WIRING DIAGRAMS.
- (J) — INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

## MISCELLANEOUS SYSTEM SYMBOLS

- ICP — INVERTER CONTROL PANEL – SEE INVERTER SPECIFICATIONS.
- IAP — INVERTER ANNUNCIATOR PANEL – SEE INVERTER SPECIFICATIONS.
- GAP — GENERATOR ANNUNCIATOR PANEL – SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- IDCS — INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL – WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- DPCS — DIMMING PANEL CONTROL STATION (DPCS) PANEL – WALL MOUNTED. SEE DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HL — LIGHTING CONTROL SYSTEM LOCAL SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HO — LIGHTING CONTROL SYSTEM OVERRIDE SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HM — LIGHTING CONTROL SYSTEM MASTER SWITCH – WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HR — IDCS/DPCS SYSTEM REMOTE STATION SWITCH – WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
- HP — IDCS/DPCS SYSTEM PARTITION STATION SWITCH – WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.

## BRANCH CIRCUIT SYMBOLS

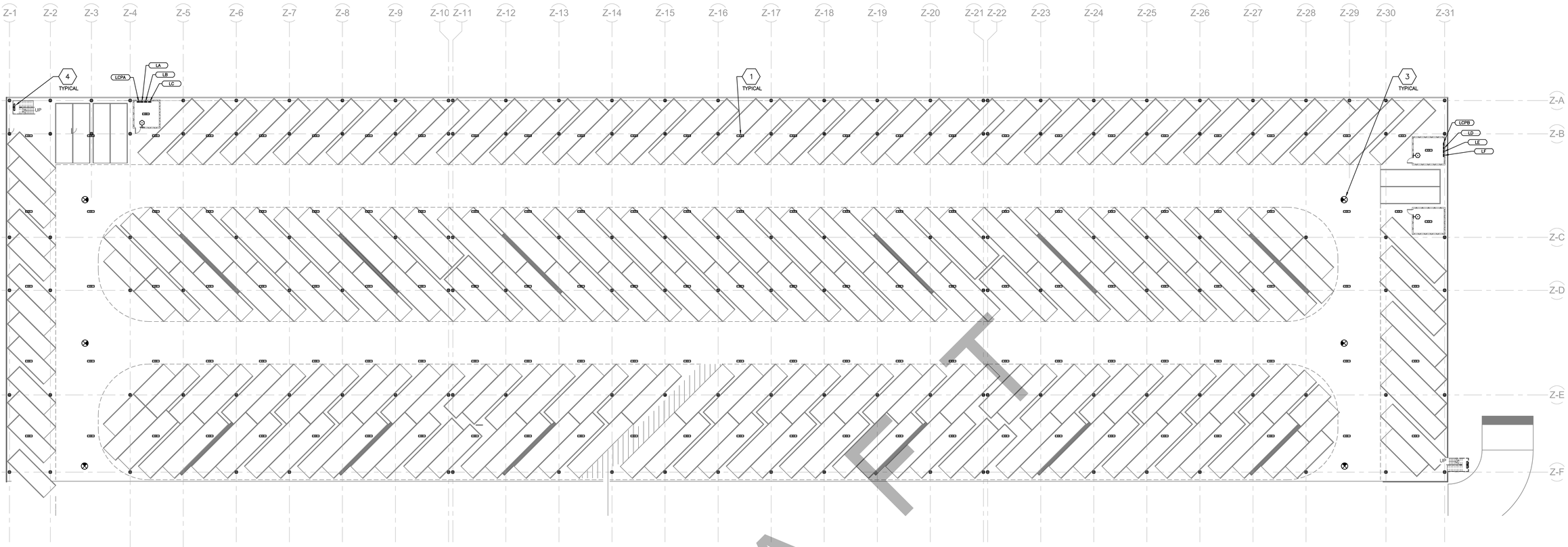
- A–1,3,5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.
- A–1&3&5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS.
- A–1+3+5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK "𝄽" INDICATES AN ISOLATED GROUND CONDUCTOR.
- CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.
- SURFACE–MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
- TANDEM WIRING CONNECTION.
- CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS–BUILT DRAWINGS
- CONDUIT CONTINUATION.
- FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH–IN.
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW
- CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

## FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS

- SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- AV — 7–GANG AV FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- AV — RECESSED FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (FSR #PWB–100–???) AND MINIMUM OF (1) 1–1/4"C.O. FROM TOP–MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATION DEPICTED ON PLANS. FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT. WHEN FIELD CONDITIONS PROHIBIT INSTALLATION OF THIS DEVICE (SUCH AS WALL STUD/CAVITY DEPTH OF LESS THAN 3" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV/AV JUNCTION BOX CONSISTING OF 4–GANG DEEP JUNCTION BOX WITH 1–1/4"C.O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT.
- SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL BOX – TYPE "WP–A". PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1"CO TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
- SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL – TYPE "WP–C". PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOOR LOCATION.

## POWER SYMBOLS

- DUPLEX RECEPTACLE, WALL MOUNTED.
- DUPLEX RECEPTACLE, WALL MOUNTED.
- DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DOUBLE DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED.
- DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED.
- COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND DUPLEX RECEPTACLES, WALL MOUNTED.
- COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED. (1,3)
- DEDICATED 20A, DUPLEX RECEPTACLE, WALL MOUNTED.
- DEDICATED 20A, DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED.
- SIMPLEX RECEPTACLE, WALL MOUNTED.
- SPECIAL RECEPTACLE, WALL MOUNTED. REFER TO PLAN NOTES.
- DUPLEX RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- COMBINATION DOUBLE DUPLEX FLUSH IN CEILING: TWO ISOLATED GROUND DUPLEX RECEPTACLES – MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX.
- COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX. (1,3)
- DEDICATED 20A DUPLEX RECEPTACLE, FLUSH IN CEILING – MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
- DEDICATED 20A DOUBLE DUPLEX RECEPTACL




LIGHTING PLAN - LEVEL 1

SCALE: 3/64" = 1'-0"

1



## LIGHTING PLAN GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION & ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED ISSUE OF THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. ALL COVE MOUNTED FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
5. ALL DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL.
6. ALL FLUORESCENT DIMMING ZONES/CHANNELS SHALL BE PROVIDED WITH 3 LINE VOLTAGE CONDUCTORS (NEUTRAL, DIMMED HOT, SWITCHED HOT) OR 2 LINE VOLTAGE CONDUCTORS/2 CONTROL CONDUCTORS AS REQUIRED BY THE CONTROL/BALLAST TYPE.
7. ALL EMERGENCY BATTERY PACK FIXTURES SHALL BE PROVIDED WITH A CONSTANT HOT CONNECTION TO THE CHARGING LEAD. SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR MORE INFORMATION.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIT SIGNS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
9. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:

   – ALL BRANCH CIRCUITS SHALL BE IN EMT.

   – ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY TRAINED AND IN PARALLEL TO STRUCTURES OR DUCT WORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
10. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
11. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
13. REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTES FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.

## PLAN NOTES:

1 --

KONSORTIUM-1
1532 E Warner Ave - Santa Ana, CA 92705
(714) 668-4200 - (714) 668-4215 Fax
www.konsortium1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWANSON
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

DATE: Issue Date

PROJECT #: Project Number

SCALE: AS NOTED

0

NORTH

SHEET #: E-2.01

# PARKING GARAGE LVL 1 LIGHTING PLAN

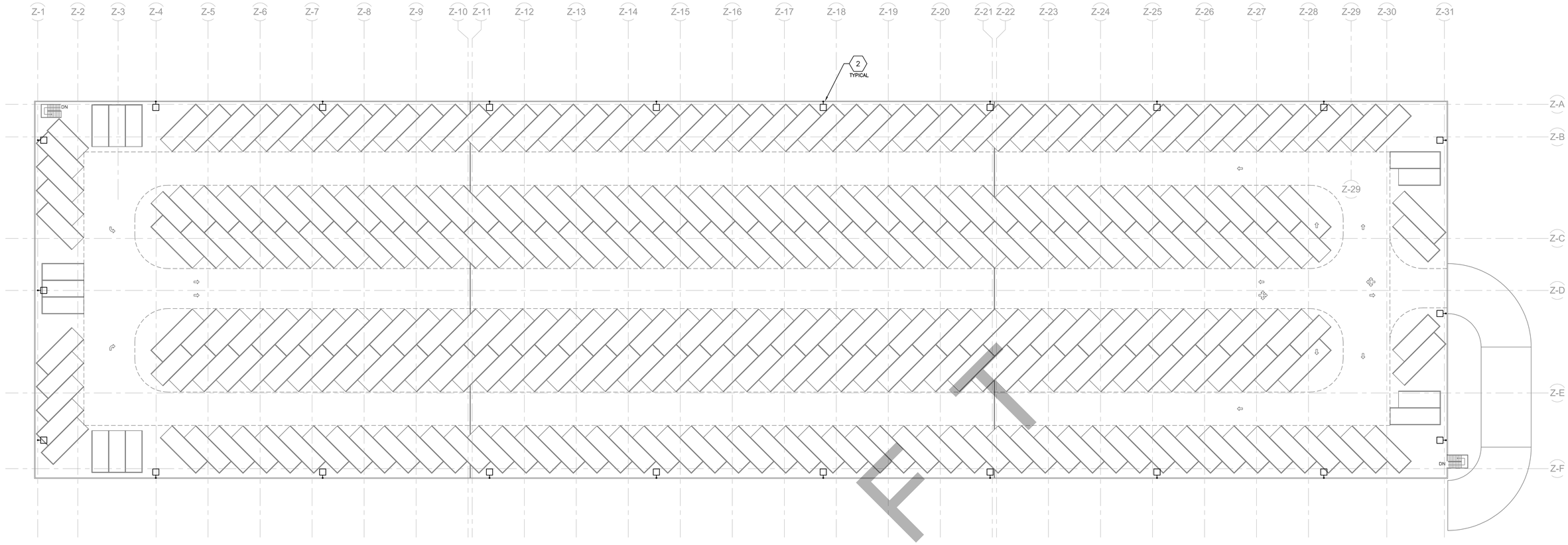


MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.1370 F 949.553.8181
info@mve-institutional.com
www.mve-architects.com

DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE




LIGHTING PLAN - LEVEL 2

SCALE: 3/64" = 1'-0"

2



## LIGHTING PLAN GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION & ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED ISSUE OF THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. ALL COVE MOUNTED FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
5. ALL DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL.
6. ALL FLUORESCENT DIMMING ZONES/CHANNELS SHALL BE PROVIDED WITH 3 LINE VOLTAGE CONDUCTORS (NEUTRAL, DIMMED HOT, SWITCHED HOT) OR 2 LINE VOLTAGE CONDUCTORS/2 CONTROL CONDUCTORS AS REQUIRED BY THE CONTROL/BALLAST TYPE.
7. ALL EMERGENCY BATTERY PACK FIXTURES SHALL BE PROVIDED WITH A CONSTANT HOT CONNECTION TO THE CHARGING LEAD. SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR MORE INFORMATION.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIT SIGNS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
9. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:

   – ALL BRANCH CIRCUITS SHALL BE IN EMT.

   – ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY TRAINED AND IN PARALLEL TO STRUCTURES OR DUCT WORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
10. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
11. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
13. REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTES FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.

## PLAN NOTES:

1 --

K1 KONSORTIUM
1532 E Warner Ave - Santa Ana, CA 92705
(714) 668-4200 - (714) 668-4215 Fax
www.konsort1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWANSON
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

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NORTH
SHEET #: E-2.02

# PARKING GARAGE LVL 2 LIGHTING PLAN



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.3350 F 949.863.3381
info@mve-institutional.com
www.mve-architects.com

DANA POINT HARBOR REVITALIZATION

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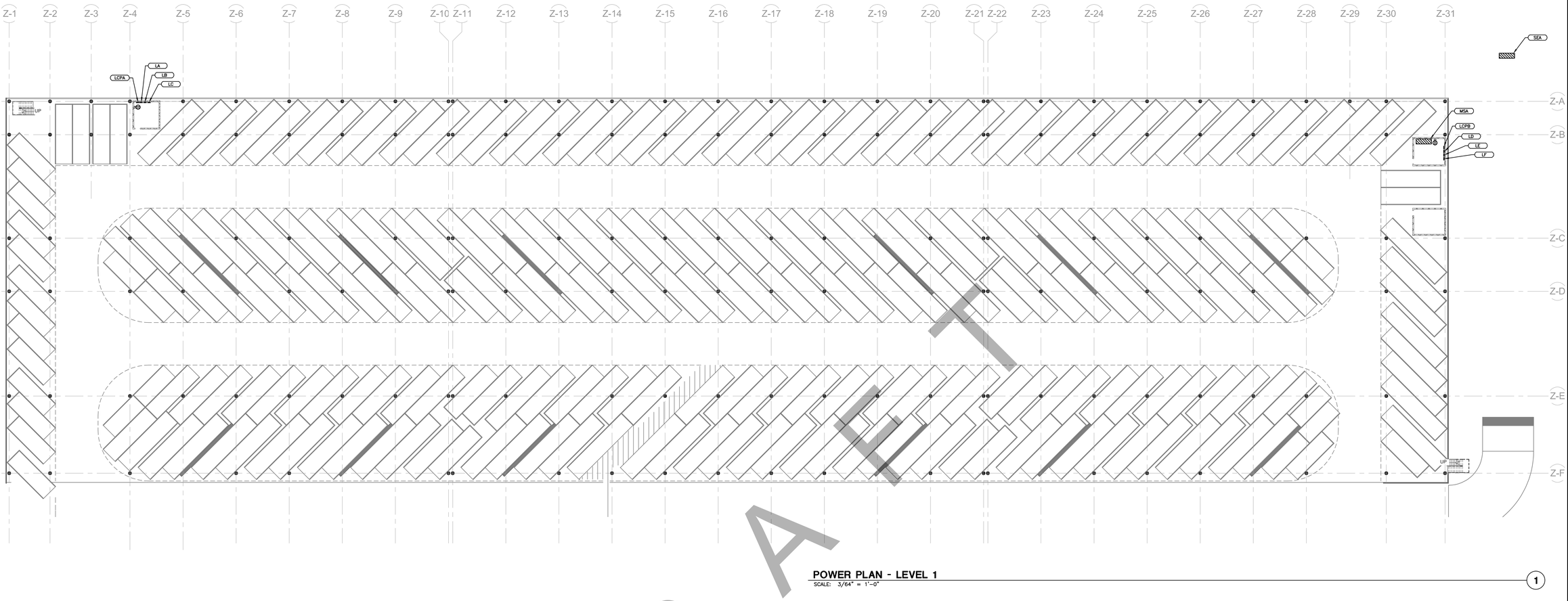


**POWER PLAN - LEVEL 1**
SCALE: 3/64" = 1'-0"

1



## COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL, (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND, (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULLBOX. CONDUITS IN PLACE OF PULLBOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2" IN DIAMETER OR LESS, AND, (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2" IN DIAMETER.
4. TERMINATE CONDUITS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2"–3" ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS AND BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS GENERALLY UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND AS APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN–SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE SITE UTILITY PLAN NOTES FOR ADDITIONAL UNDERGROUND COMMUNICATIONS CONDUIT SEALING REQUIREMENTS.
8. ALL PULLBOXES SHALL BE SIZED AND INSTALLED PER ANSI/TIA/EIA–569B. PULLBOXES FOR UNDER FLOOR CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULLBOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULLBOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3 RATED. PULLBOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

| CONDUIT SIZE | WIDTH | LENGTH | DEPTH | WIDTH INCREASE PER ADDITIONAL CONDUIT |
|---|---|---|---|---|
| 1" | 4" | 16" | 3" | 2" |
| 2" | 8" | 36" | 4" | 5" |
| 3" | 12" | 48" | 5" | 6" |
| 4" | 15" | 60" | 8" | 8" |

   FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA/EIA 569B TABLE 12. – LATEST PUBLISHED EDITION.
9. CONDUIT(S) SHALL EXIT A PULLBOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

## POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24" MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL–MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH–IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH–IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
   – ALL BRANCH CIRCUITS SHALL BE IN EMT.
   – ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.
   VISUALLY OBJECTIONABLE BRANCH CIRCUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) WITHIN 6 FEET OF ANY SINK OR THERAPEUTIC TUB, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, AND WITHIN ANY KITCHEN SPACE.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON–BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

## PLAN NOTES:

1 ?????

# DANA POINT HARBOR REVITALIZATION

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KONSORTIUM 1
1532 E Warner Ave - Santa Ana, CA 92705
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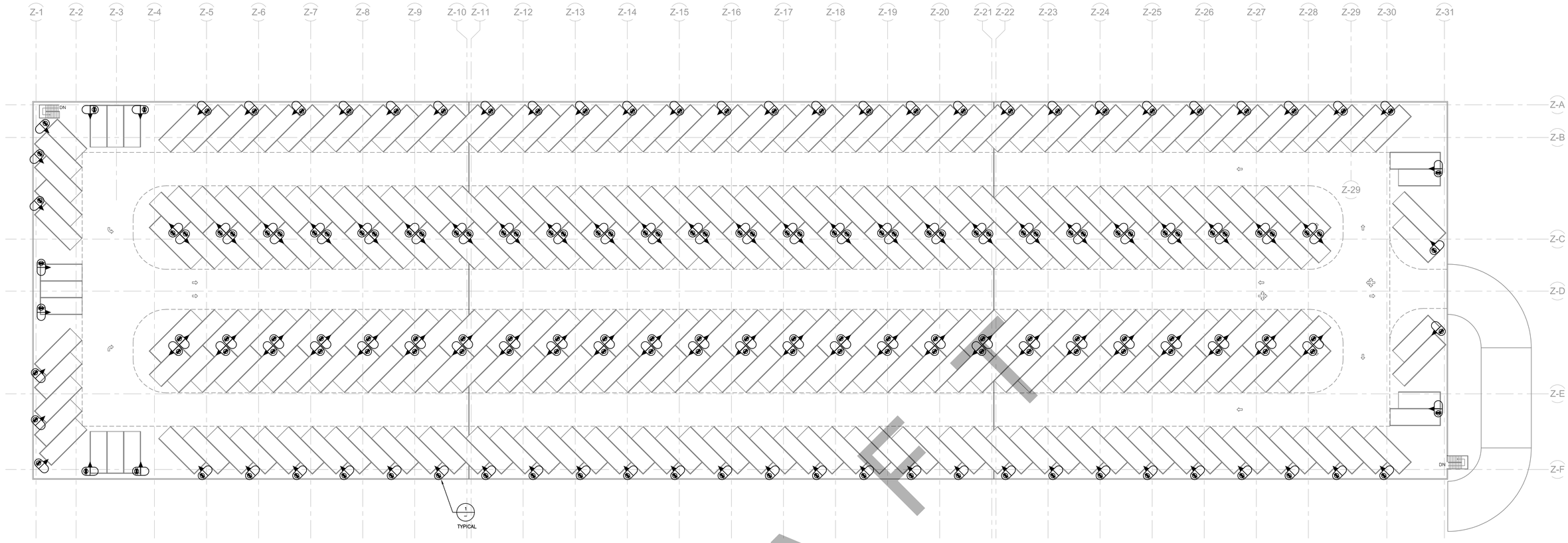
# PARKING GARAGE LVL 1 POWER PLAN



MVE Institutional
Planning Architecture Interiors

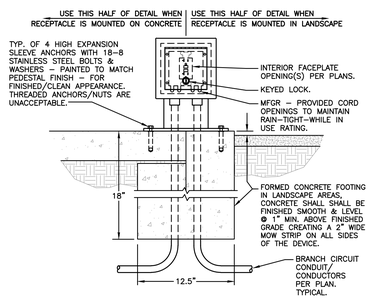
MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.3350 F 949.863.3381
info@mve-institutional.com
www.mve-architects.com




## POWER PLAN - LEVEL 2

SCALE: 3/64" = 1'-0"

1




## SINGLE SERVICE "WP-C" SITE RECEPTACLE DETAIL

SCALE: N.T.S.

1

## COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL, (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND, (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULLBOX. CONDUITS IN PLACE OF PULLBOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2" IN DIAMETER OR LESS, AND, (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2" IN DIAMETER.
4. TERMINATE CONDUITS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2"-3" ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS AND BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS GENERALLY UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND AS APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE SITE UTILITY PLAN NOTES FOR ADDITIONAL UNDERGROUND COMMUNICATIONS CONDUIT SEALING REQUIREMENTS.
8. ALL PULLBOXES SHALL BE SIZED AND INSTALLED PER ANSI/TIA/EIA-569B. PULLBOXES FOR UNDER FLOOR CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULLBOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULLBOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3 RATED. PULLBOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

| CONDUIT SIZE | WIDTH | LENGTH | DEPTH | WIDTH INCREASE PER ADDITIONAL CONDUIT |
|---|---|---|---|---|
| 1" | 4" | 16" | 3" | 2" |
| 2" | 8" | 36" | 4" | 5" |
| 3" | 12" | 48" | 5" | 6" |
| 4" | 15" | 60" | 8" | 8" |

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA/EIA 569B TABLE 12. - LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULLBOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

## POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24" MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:

   - ALL BRANCH CIRCUITS SHALL BE IN EMT.
   - ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.

   VISUALLY OBJECTIONABLE BRANCH CIRCUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) WITHIN 6 FEET OF ANY SINK OR THERAPEUTIC TUB, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, AND WITHIN ANY KITCHEN SPACE.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

## PLAN NOTES:

1 ?????



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

K1 CONSORTIUM
1532 E Warner Ave - Santa Ana, CA 92705
(714) 668-4200 - (714) 668-4215 Fax
www.konsortium1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWANSON
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

DATE: Issue Date
PROJECT #: Project Number
SCALE: AS NOTED
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NORTH
SHEET #: E-3.02

# PARKING GARAGE LVL 2 POWER PLAN



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.3350 F 949.863.3381
info@mve-institutional.com
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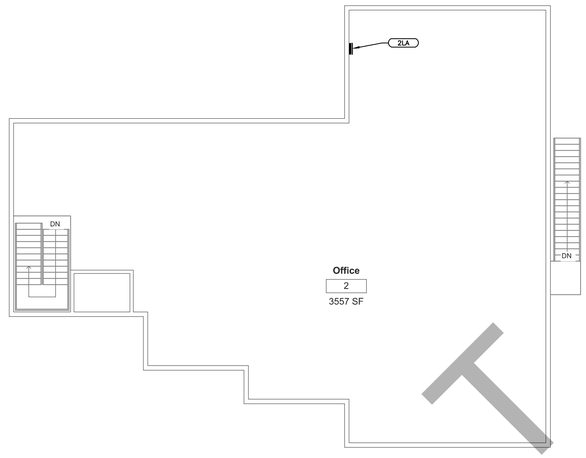
## PLAN NOTES:

1 ?????




## ELECTRICAL PLAN - LEVEL 2

SCALE: 1/8" = 1'-0"

2

## POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24" MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
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| CONDUIT SIZE | WIDTH | LENGTH | DEPTH | WIDTH INCREASE PER ADDITIONAL CONDUIT |
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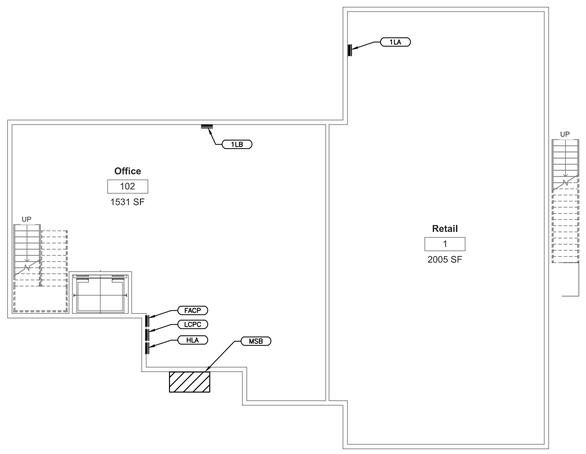


## ELECTRICAL PLAN - LEVEL 1

SCALE: 1/8" = 1'-0"

1



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE


KONSORTIUM 1
1532 E Warner Ave - Santa Ana, CA 92705
(714) 668-4200 - (714) 668-4215 Fax
www.konsrtium1.com
JERRY LEONHARDT


REGISTERED PROFESSIONAL ENGINEER
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No. E15610
ELECTRICAL
STATE OF CALIFORNIA

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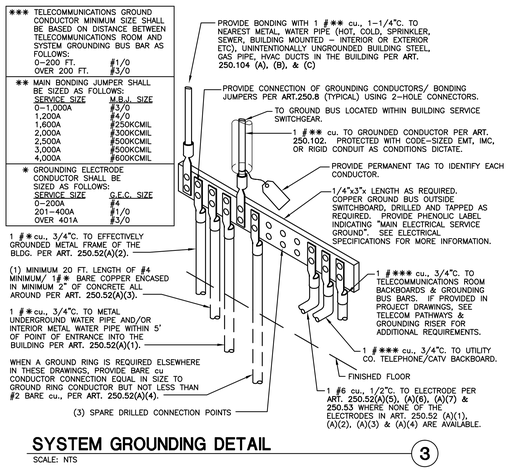
# MARINE SERVICE BLDG ELECTRICAL PLAN



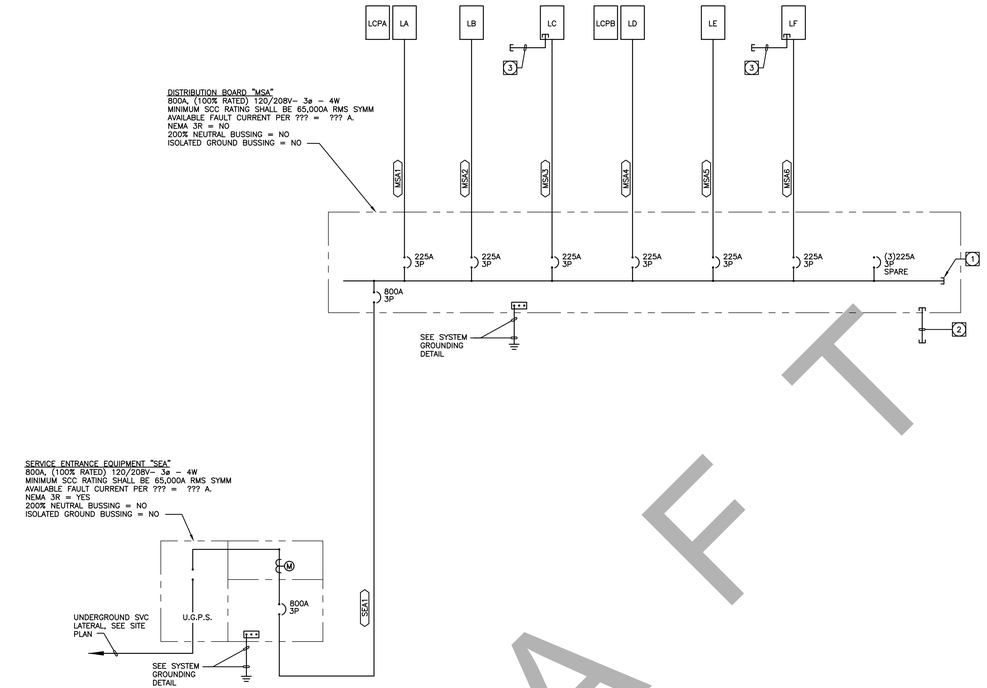

MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.809.3350 F 949.809.3381
info@mve-institutional.com
www.mve-architects.com



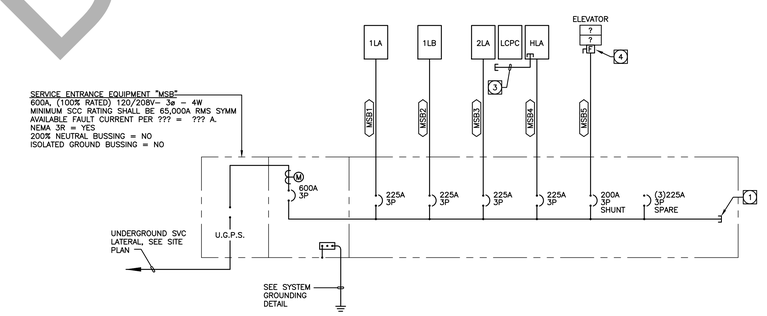

## SYSTEM GROUNDING DETAIL (3)

SCALE: NTS




## PARKING GARAGE SINGLE LINE DISTRIBUTION DIAGRAM (1)

SCALE: N.T.S.




## MARINE SERVICE BUILDING SINGLE LINE DISTRIBUTION DIAGRAM (2)

SCALE: N.T.S.

## GENERAL SINGLE LINE DIAGRAM NOTES:

1. ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER–HAMMER, RSE–SIERRA, G.E., OR SIEMENS.
2. ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
3. ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT–SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY UL IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC–WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING. WHICH SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:

   **CAUTION – SERIES COMBINATION SYSTEM RATED AT ??,??? AMPERES. USE ONLY IDENTIFIED REPLACEMENT COMPONENTS IN THIS SYSTEM.**

   WHERE ??,??? REPRESENTS AVAILABLE FAULT CURRENT. SEE SPECIFICATIONS FOR PLACARD REQUIREMENTS.
5. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
6. ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED–RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION. NON–SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH A SOLID STATE MAIN OVERCURRENT DEVICE, IF SHOWN ON PLANS, AND WITH BUSSING RATED AT 100% OPERATION. ALL NON–SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED–RATED. BACKFEED RATINGS SHALL COMPLY WITH NEC, OR CEC WHERE ADOPTED, **690.64(B)(5)**. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
7. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:
   a. **TIN–PLATED ALUMINUM** BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.
   b. LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.
   c. PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC–WHERE ADOPTED) SECTIONS **225.37, 230.2(E), 690.56(B) & (C), 692.56, 700.8, 701.9, AND 702.8** DENOTING THE PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY OR STAND–BY POWER SOURCES AS APPLICABLE.
8. CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
9. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS TRANSFORMERS, PANEL BOARDS AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE PRIOR TO FABRICATION.
10. ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4"= 1'–0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON–BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
12. SEE POWER SYSTEMS STUDY SPECIFICATION FOR ADDITIONAL REQUIREMENTS. ALL REQUIRED POWER SYSTEMS STUDIES MUST BE COMPLETED AND SUBMITTED WITH SWITCHGEAR SUBMITTAL. FAILURE TO DO SO WILL PREVENT THE ENGINEER FROM EFFECTIVELY EVALUATING THE SUBMITTAL AND SHALL RESULT IN REJECTION OF THE SWITCHGEAR SUBMITTAL AS INCOMPLETE.
13. WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OR WHERE A NEW GROUND FAULT PROTECTIVE DEVICE IS BEING INSTALLED, A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER NEC (OR CEC–WHERE ADOPTED) **230.95(C)**. THE GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION. VERIFICATION OF DEVICE SETTINGS PER THE POWER SYSTEMS STUDY SPECIFICATION SHALL BE PERFORMED BY THE SAME INDEPENDENT TESTING AGENCY. THE GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER OF RECORD.

## SPECIFIC SINGLE LINE NOTES:

1. BUSSING SHALL BE PROVIDED FOR FUTURE BUS EXTENSION TO FUTURE DISTRIBUTION SYSTEM.
2. PROVIDE (1) 4"C.O. FOR EVERY 800 AMPS OF SERVICE SIZE (MINIMUM OF ONE) STUBBED OUTSIDE THE BUILDING TO THE NEAREST PLANTER AREA. CAP AND MARK.
3. PROVIDE (4) 1"C.O. STUBBED OUTSIDE THE BUILDING TO THE NEAREST PLANTER AREA. CAP AND MARK.
4. SEE MOTORIZED EQUIPMENT SCHEDULE FOR MORE INFORMATION.



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NORTH

SHEET #: E-4.01

# SINGLE LINE DIAGRAM



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.3350 F 949.553.3381
info@mve-institutional.com
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## GENERAL LIGHTING FIXTURE SCHEDULE NOTES:

A. THE LIGHTING FIXTURES AND BALLASTS FOR THIS PROJECT HAVE BEEN SPECIFIED TO INSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNERS, ARCHITECTS, AND ENGINEERS DESIGN CRITERIA, WHILE STILL FITTING WITHIN THE ESTABLISHED PROJECT BUDGET. IN ADDITION, THE MANUFACTURING AND SHIPPING TIME REQUIREMENTS FOR EACH OF THE SPECIFIED FIXTURES HAS BEEN VERIFIED TO FIT WITHIN THE ESTABLISHED CONSTRUCTION SCHEDULE.

B. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED – UNLESS APPROVED AS STATED HEREIN. LIGHTING FIXTURE AND BALLAST SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ENGINEER, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS:

1. A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
2. A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF UTILIZATION, AND AN ISO-FOOT-CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.
3. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LUMINAIRE CATALOG NUMBERS. MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
4. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY EFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
5. FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ENGINEER, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.
6. FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX:MIN AND AVG:MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS.
   a. THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
   b. THE PRINTOUT SHALL BE BASED ON PROVIDING MAINTAINED FOOT-CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
   c. THE PRINTOUT SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.

C. "?" CHARACTERS IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURES ARE SPECIFIED IN A GENERIC MOUNTING FORMAT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED ISSUE OF THE UNIFORM BUILDING CODE, AS WELL AS ANY LOCAL CODES.

D. CONFLICTS BETWEEN CATALOG NUMBERS AND FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, PRIOR TO BID TIME, FOR CLARIFICATION.

E. "?" CHARACTERS IN FIXTURE MODEL NUMBER INDICATE THAT ALL FIXTURE VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING – SEE DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES.

F. ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS CUSTOM, SHALL BE SELECTED FROM THE FULL RANGE OF MANUFACTURERS STANDARD COLOR OPTIONS, AS SELECTED BY THE ARCHITECT. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS. ALL FIXTURES INDICATED WITH A CUSTOM COLOR SHALL BE PROVIDED WITH A CUSTOM COLOR PAINT PER THE ARCHITECTURAL REVIEW COMMENTS OF THE SUBMITTED SHOP DRAWINGS.

G. ALL BALLASTS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

1. "?" CHARACTERS IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE BALLAST TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR – USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION. IT IS POSSIBLE THAT A SINGLE FIXTURE TYPE COULD BE REQUIRED IN VARIOUS BALLAST CONFIGURATIONS.
2. FLUORESCENT(LINEAR/COMPACT):
   a. (1) – NO SUFFIX: PROVIDE ELECTRONIC, INSTANT START STANDARD BALLAST WITH HIGH POWER FACTOR, MAXIMUM THD OF 20%, CLASS "A" SOUND RATING, AND ZERO DEGREE FAHRENHEIT, MINIMUM START-TEMPERATURE RATING.
   b. ACCEPTABLE MANUFACTURERS: ADVANCE, SYLVANIA, OR GE.
   c. (1a) – "a" SUFFIX: PROVIDE ELECTRONIC PROGRAM START BALLAST WITH 0.95 MIN. POWER FACTOR, MAXIMUM THD OF 10%, CLASS "A" SOUND RATING, AND ZERO DEGREE FAHRENHEIT, MINIMUM START-TEMPERATURE RATING.
   d. ACCEPTABLE MANUFACTURERS/MODEL FAMILY:
      ADVANCE OPTANIUM, SYLVANIA QUICKTRONIC PROFESSIONAL, OR GE ULTRASTART
      WHERE AN OPTANIUM, QUICKTRONIC PROFESSIONAL OR ULTRASTART BALLAST IS NOT MANUFACTURED FOR A PARTICULAR LAMP(S) PROVIDE:
      ADVANCE CENTIUM, SYLVANIA QUICKTRONIC HIGH EFFICIENCY, OR GE PROLINE BALLASTS.
3. MASTER-SATELLITE / INBOARD-OUTBOARD SWITCHING:
   a. WHERE FIXTURES ARE INDICATED WITH TANDEM WIRE CONNECTION, A MASTER-SATELLITE BALLAST CONFIGURATION SHALL BE PROVIDED THAT ACCOMMODATES THE INDICATED IN-BOARD / OUT-BOARD SWITCHING CONFIGURATION.
   b. SINGLE STAND ALONE FIXTURES IN THE SAME SWITCHING ZONE AS TANDEM WIRED FIXTURES SHALL BE PROVIDED WITH MULTIPLE BALLASTS TO ACCOMMODATE THE INDICATED IN-BOARD / OUT-BOARD SWITCHING CONFIGURATION.
   c. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING THE APPROPRIATE BALLAST TYPE AND QUANTITY – BASED UPON THE FIXTURE CALLOUT INFORMATION AND SWITCHING CONFIGURATION.
4. STEPPED DIMMING FLUORESCENT (LINEAR):
   a. (1b) – "b" SUFFIX: PROVIDE ELECTRONIC, PROGRAM START, STEPPED DIMMING BALLAST (0%-50%-100%) WITH 0.95 MIN. POWER FACTOR, 10% MAXIMUM THD, CLASS "A" SOUND RATING, 100% OUTPUT BALLAST FACTOR BETWEEN 0.84 – 1.00, AND 50 DEGREE FAHRENHEIT MINIMUM START-TEMPERATURE RATING. BALLAST SHALL BE COMPLIANT WITH APPLICABLE ENERGY CODE.
   b. ACCEPTABLE MANUFACTURERS: UNIVERSAL, PHILIPS ADVANCE, OR SYLVANIA
5. CONTINUOUS DIMMING FLUORESCENT(LINEAR/COMPACT):
   a. PROVIDE ELECTRONIC CONTINUOUS DIMMING BALLAST WITH HIGH POWER FACTOR, MAXIMUM THD OF 20%, CLASS "A" OR BETTER SOUND RATING, BALLAST FACTOR (BF) AS INDICATED, AND 50 DEGREE FAHRENHEIT RATING. BALLAST MUST BE COMPATIBLE WITH DIMMER AND/OR DIMMING SYSTEM. CONTINUOUS DIMMING BALLAST SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:

| | | | | |
|---|---|---|---|---|
| DIM 1% – | (7c) | LUTRON #H3D SERIES | BF = 1.0 | (T8/T5/T5HO) |
| | | LUTRON #HL3 SERIES | BF = 0.95 | (T4T/T4Q) |
| DIM 5% – | (7d) | LUTRON #H3D SERIES | BF = 1.0 | (T8/T5/T5HO/T5FT) |
| | | LUTRON #EC3 SERIES | BF = 0.95 | (T4T/T4Q) |
| DIM 10% – | (7e) | LUTRON #EC5 SERIES | BF = 0.85ST8/1.0T5 | (T8/T5/T5HO/T5FT) |
| | | LUTRON #EC3 SERIES | BF = 0.95 | (T4T/T4Q) |
| DIM LV – | (7f) | ADVANCE #MARK 7 (0-10V) | BF = 1.0 | (T4T/T4Q) (T8/T5/T5HO/T5FT)) |
| DIM 2-WIRE – | (7g) | LUTRON #2W SERIES | BF = 0.95 | (T4T) |
| | | | BF = 0.85 | (T8) |

   b. EQUAL BY ADVANCE, UNIVERSAL OR SYLVANIA QUICKTRONIC.
6. HIGH INTENSITY DISCHARGE (HID):
   a. (1) – NO SUFFIX: PROVIDE HID BALLASTS WITH HIGH POWER FACTOR, ENCAPSULATED CORE & COIL TYPE, CORE & COIL TYPE, OR F-CAN TYPE, WITH CLASS "A" OR BETTER SOUND RATING UP THROUGH 175W AND CLASS "B" ABOVE 175W THROUGH 400W, AND ZERO DEGREE FAHRENHEIT MINIMUM START-TEMPERATURE RATING. ELECTRONIC HID BALLASTS SHALL BE UTILIZED FOR METAL HALIDE LAMPS 150W OR LESS. ALL NEW METAL HALIDE LUMINAIRES WITH 150W TO 500W LAMPS PROVIDED ON THE PROJECT SHALL BE EQUIPPED WITH PULSE START BALLASTS TO COMPLY WITH SECTION 1602, CCR TITLE 20 APPLIANCE EFFICIENCY STANDARDS.
   b. WHEN REMOTE HID BALLASTS ARE REQUIRED, CONTRACTOR TO COORDINATE PROPER IGNITER SELECTION WITH FIXTURE MANUFACTURER BASED ON INSTALLATION-SPECIFIC DISTANCE REQUIREMENTS ON A PER FIXTURE BASIS. IF REMOTE ELECTRONIC HID BALLASTS ARE REQUIRED ON THE PROJECT AND EXCEED DISTANCE LIMITATIONS FOR ELECTRONIC HID BALLASTS, MAGNETIC BALLASTS SHALL BE PERMITTED FOR 150W AND LOWER WATTAGE HID FIXTURES.
   c. ACCEPTABLE MANUFACTURERS: ADVANCE, GE, SYLVANIA, UNIVERSAL OR VENTURE

H. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:

1. INTEGRAL BATTERY PACK (EB):
   3a/3EB – FIXTURE CONNECTED TO CIRCUIT "3", CONTROL SWITCHLEG "a" – WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
   3NL/3EB – FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "#3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
2. REMOTE BACK-UP SOURCE (EM):
   3a/3EM – ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #GR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS, CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.
   3NL/3EM – FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3".
   REMOTE BACK-UP SOURCE (EM) NOTES:
   – ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE. PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
3. EMERGENCY BATTERY PACKS SHALL BE PROVIDED AS FOLLOWS:

LINEAR T8 FLUORESCENT LAMPS:

| | | | |
|---|---|---|---|
| 8FT T8 | 1 LAMP | 1400 LUMENS | IOTA #I-320 OR BODINE #B50 |
| 5FT T8 | 1 LAMP | 1325 LUMENS | IOTA #I-320 OR BODINE #B50 |
| 4FT T8 | 2/1 LAMPS | 1350/1350 LUMENS | IOTA #I-320 OR BODINE #B50 |
| 3FT T8 | 2/1 LAMPS | 1200/1100 LUMENS | IOTA #I-320 OR BODINE #B50 |
| 2FT T8 | 2/1 LAMPS | 1125/1100 LUMENS | IOTA #I-320 OR BODINE #B50 |

LINEAR T5/T5HO FLUORESCENT LAMPS:

| | | | |
|---|---|---|---|
| 4FT T5HO | 1 LAMP | 1250 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |
| 3FT T5HO | 1 LAMP | 1100 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |
| 2FT T5HO | 1 LAMP | 700 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |
| 4FT T5 | 1 LAMP | 1200 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |
| 3FT T5 | 1 LAMP | 850 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |
| 2FT T5 | 1 LAMP | 700 LUMENS | IOTA #ISL-540 OR BODINE #LP600 |

HIGH LUMEN COMPACT FLUORESCENT LAMPS (BIAX):

| | | | |
|---|---|---|---|
| 55W BIAX | 1 LAMP | 1050 LUMENS | IOTA #I-320 OR BODINE #LP600STU |
| 50W BIAX | 1 LAMP | 1050 LUMENS | IOTA #I-320 OR BODINE #LP600STU |
| 40W BIAX | 1 LAMP | 1050 LUMENS | IOTA #I-320 – NO KNOWN EQUAL |
| 36W BIAX | 1 LAMP | 1050 LUMENS | IOTA #I-320 OR BODINE #B50 |
| 24W BIAX | 1 LAMP | 800 LUMENS | BODINE #B84CG – NO KNOWN EQUAL |
| 18W BIAX | 1 LAMP | 775 LUMENS | BODINE #B84CG – NO KNOWN EQUAL |

COMPACT FLUORESCENT LAMPS:

| | | | |
|---|---|---|---|
| 70W CFL | 1 LAMP | 1200 LUMENS | BODINE #B75C – NO KNOWN EQUAL |
| 57W CFL | 1 LAMP | 1160 LUMENS | IOTA #I-420 OR BODINE #B75C |
| 42W CFL | 1 LAMP | 1250 LUMENS | IOTA #I-420 OR BODINE #B84CG |
| 32W CFL | 1 LAMP | 1050 LUMENS | IOTA #I-420 OR BODINE #B84CG |
| 26W CFL | 1 LAMP | 700 LUMENS | IOTA #I-420 OR BODINE #B84CG |
| 18W CFL | 1 LAMP | 600 LUMENS | IOTA #I-420 OR BODINE #B84CG |
| 13W CFL | 1 LAMP | 600 LUMENS | IOTA #I-420 OR BODINE #B84CG |

LED LAMPS:

BODINE #BSL23/#BSL722 SERIES– NO KNOWN EQUAL

TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BALLASTS AT THE FACTORY AND OBTAIN A UL LISTING OF THE FIXTURE WITH EMERGENCY BALLAST. FIELD-INSTALLATION OF LED EMERGENCY BALLAST(S) IS PROHIBITED. SHOULD THE SPECIFIED LED EMERGENCY BALLAST(S) NOT FIT WITHIN A GIVEN FIXTURE(S), CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF-DIAGNOSTIC MINI INVERTER(S) (IOTA #ILS SERIES OR BODINE # ELI-???-SD) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM.

EMERGENCY BATTERY PACK NOTES:

– PROVIDE INTEGRAL TEST SWITCH OPTION FOR ALL EMERGENCY BALLASTS INSTALLED IN DOWN LIGHTS.

– CONTRACTOR TO VERIFY WITH FIXTURE MANUFACTURER(S) PRIOR TO BID THAT EMERGENCY BALLASTS ARE INTEGRAL TO FIXTURE HOUSINGS. SHOULD A BALLAST(S) NOT FIT WITHIN A GIVEN FIXTURE(S), CONTRACTOR SHALL INCLUDE ALL COSTS TO LOCATE EMERGENCY BALLAST(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.

– PROVIDE "DL" OPTION IN ALL DAMP LABEL INSTALLATIONS.

5. ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT – MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OF SLACK LEADS FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
6. BATTERY PACKS ALL SHALL BE PROVIDED WITH A COMBINATION TEST SWITCH / CHARGE LIGHT.

I. ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF FACES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN. ANY DISCREPANCIES BETWEEN EXIT SIGNS DEPICTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.

J. ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. TRACK LENGTH SHALL BE PER DRAWINGS.

K. "?" CHARACTERS IN THE FIXTURE MODEL NUMBER INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING / PROVIDING SUBMITTALS.

L. PROVIDE A SUBMITTAL / SHOP DRAWING SUBMITTAL PER THE GENERAL PRODUCT REQUIREMENT SECTION FOR EACH FIXTURE TYPE INCLUDING BALLAST(S). ANY LIGHTING FIXTURES SUBMITTAL SUBMITTED WITHOUT SPECIFIC FIXTURE(S) BALLAST INFORMATION SHALL BE REJECTED AS INCOMPLETE. IN ADDITION, SEE GENERAL LAMP SCHEDULE NOTES FOR SEPARATE LAMP SUBMITTAL REQUIREMENTS.

M. PROVIDE LAMPING PER LAMP SCHEDULE.

N. SOCKETS SHALL BE GENERAL ELECTRIC, BRYANT, OR EQUAL, WHITE, TWIST-TURN CONTACT TYPE. PUSH CONTACT TYPE SOCKETS WILL NOT BE ALLOWED.

O. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE INDUSTRY AND SAFETY STANDARDS AND ALL NATIONAL AND LOCAL ELECTRICAL AND SEISMIC CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.

P. LOCATIONS OF FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN AND THE ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, IN WRITING, PRIOR TO ORDERING FIXTURES.

Q. CONTRACTOR TO INCLUDE FIVE MINUTES OF AFTER DARK AIMING/ADJUSTING TIME (TWO HOURS MINIMUM) FOR ANY ADJUSTABLE FIXTURE AND FOR EACH INDIVIDUAL FIXTURE HEAD OR LAMP HOLDER IN A MULTI-FIXTURE / MULTI-LAMP ASSEMBLY. FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT, AND ENGINEER.

R. ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES, AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. THE CAPITAL LETTER ADJACENT TO THE FIXTURE SYMBOL(S) INDICATES THE FOOTING TYPE – SEE ELECTRICAL DETAILS FOR MORE INFORMATION.

S. "NO KNOWN EQUAL" LIGHTING FIXTURE PRICING/BIDDING NOTES

1. EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
2. A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8-1/2" X 11" SHEET AS FOLLOWS:

| "NO KNOWN EQUAL" FIXTURE TYPE | LINE ITEM/ PER UNIT MATERIAL COST |
|---|---|
| 1 | $ XXXXX/EACH |
| 2 | $ XXXXX/EACH |
| 3 | $ XXXXX/EACH |

3. FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE WILL RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTORS BID.

T. "NO EQUAL – OWNER STANDARD" LIGHTING FIXTURE PRICING/BIDDING NOTES:

1. FIXTURES IDENTIFIED AS "NO EQUAL – OWNER STANDARD" ARE TO BE PROVIDED AS SPECIFIED.
2. SUBSTITUTIONS ARE STRICTLY PROHIBITED.

## LIGHTING FIXTURE SCHEDULE

| SYMBOL | TYPE | MANUFACTURER AND MODEL NUMBER | FIXTURE VA/ WATTS | LAMP/ LAMP OPTION | GENERAL DESCRIPTION |
|---|---|---|---|---|---|
| ▭▭ | 1 | METALUX<br>VT2<br>VT2-232-DR-???-EB81-SSL<br>EQUAL BY:<br>DAYBRITE | 58/59 | F13/3500 | SURFACE MOUNTED FLUORESCENT, 2 LAMP, WITH FIBERGLASS HOUSING, POLYURETHANE GASKET, STAINLESS STEEL LATCHES, AND HIGH IMPACT ACRYLIC LENS. U.L. LISTED FOR WET LOCATIONS. |
| □→ | 2 | MCGRAW EDISON<br>VENTUS LED<br>#VTS-B12-LED-???-T4-BZ-LCF<br>EQUAL BY: | 285 | LED | SINGLE LED FIXTURE, POLE MOUNTED AT +15'-0" ABOVE GRADE. TYPE T4 DISTRIBUTION, (12) 21 LIGHTBARS, DIE-CAST ALUMINUM FRAME AND EXTRUDED ALUMINUM HEAT SINK. PROVIDE 15'-0" ROUND ALUMINUM POLE, MCGRAW EDISON #RSA4M15NA. BRONZE FINISH. |
| ⊗ | 3 | SURE-LITES<br>TRX1<br>TRX1-9-G-WH-20<br>EQUAL BY: | – | – | SURFACE MOUNTED SELF-LUMINOUS EXIT SIGN WITH HIGH IMPACT FLAME RETARDANT WHITE PLASTIC HOUSING. PROVIDE CHEVRONS PER ARCHITECTURAL PLANS. |
| ▭ | 4 | METALUX<br>VT2<br>VT2-232-DR-???-EB81-SSL<br>EQUAL BY:<br>DAYBRITE | 58/59 | F13/3500 | WALL MOUNTED FLUORESCENT, 2 LAMP, WITH FIBERGLASS HOUSING, POLYURETHANE GASKET, STAINLESS STEEL LATCHES, AND HIGH IMPACT ACRYLIC LENS. U.L. LISTED FOR WET LOCATIONS. |
| | 5 | EQUAL BY: | -/- | -/- | |
| | 6 | EQUAL BY: | -/- | -/- | |
| | 7 | EQUAL BY: | -/- | -/- | |
| | 8 | EQUAL BY: | -/- | -/- | |
| | 9 | EQUAL BY: | -/- | -/- | |
| | 10 | EQUAL BY: | -/- | -/- | |
| | 11 | EQUAL BY: | -/- | -/- | |
| | 12 | EQUAL BY: | -/- | -/- | |
| | 13 | EQUAL BY: | -/- | -/- | |
| | 14 | EQUAL BY: | -/- | -/- | |
| | 15 | EQUAL BY: | -/- | -/- | |

SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES FOR CRITICAL FIXTURE SPECIFICATION AND ORDERING INFORMATION.

## FLUORESCENT LAMP SCHEDULE

| TYPE | MANUFACTURER AND MODEL NUMBER | WATTS / VOLTAGE | I-LUMENS / M-LUMENS | C.R.I. / LIFE | C.B.C.P / B. SPREAD | °K / °K +/- | GENERAL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| F13 | G.E.<br>#F32T8/SPX??/ECO<br>EQUAL BY:<br>OSRAM SYLVANIA AND PHILIPS | 32W / N/A | 2950 / 2800<br>2800 / 2660 (5000°K ONLY) | 86 / 20,000 | N/A / N/A | 3000 / N/A<br>3500 / N/A<br>4100 / N/A<br>5000 / N/A | 4'-0" FLUORESCENT T8 LAMP WITH A MEDIUM BIPIN BASE<br>TCLP COMPLIANT |

## GENERAL LAMP SCHEDULE NOTES:

A. THE LAMPS FOR THIS PROJECT HAVE BEEN SPECIFIED TO INSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNERS, ARCHITECTS, AND ENGINEERS DESIGN CRITERIA, WHILE STILL FITTING WITHIN THE ESTABLISHED PROJECT BUDGET.

B. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED – UNLESS APPROVED AS STATED HEREIN. LAMP SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ENGINEER, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS.

1. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LAMP CATALOG NUMBERS. MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
2. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY EFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.

C. CONFLICTS BETWEEN CATALOG NUMBERS AND LAMP DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, PRIOR TO BID TIME, FOR CLARIFICATION.

D. UNLESS SPECIFIED OTHERWISE, FURNISH AND INSTALL ALL LAMP(S), AS REQUIRED, FOR EACH FIXTURE INDICATED ON THE DRAWINGS.

E. CONTRACTOR TO REPLACE ALL FAILED LAMPS, AS REQUIRED, UNTIL WRITTEN ACCEPTANCE OF THE PROJECT IS EXECUTED BY THE OWNER.

F. AT THE COMPLETION OF THE PROJECT, CONTRACTOR SHALL PROVIDE TO THE OWNER AN ADDITIONAL 5% ( MINIMUM QUANTITY OF TWO ) STOCK OF LAMPS FOR EACH LAMP TYPE UTILIZED ON THE PROJECT.

G. "?" SYMBOLS IN THE LAMP MODEL NUMBER INDICATE A LAMP OPTION THAT IS IDENTIFIED IN THE LIGHTING FIXTURE SCHEDULE "LAMP" COLUMN.

H. THE FOLLOWING INFORMATION IS PROVIDED IN THE LAMP SCHEDULE:

WATTS = NOMINAL LAMP WATTAGE – AS DEFINED BY FTC LAMP LABEL RULES.

VOLTS = LAMP OPERATING VOLTAGE – WHEN RELEVANT AS DEFINED BY FTC LAMP LABEL RULES.

I-LUMENS = MINIMUM REQUIRED INITIAL LUMENS – AS DEFINED BY FTC LAMP LABEL RULES.

M-LUMENS = MINIMUM REQUIRED MEAN LUMENS – AS DEFINED BY FTC LAMP LABEL RULES.

C.R.I. = MINIMUM REQUIRED COLOR RENDERING INDEX RATING.

LIFE = MINIMUM REQUIRED LIFE RATING IN HOURS – AS DEFINED BY FTC LAMP LABEL RULES.

C.B.C.P. = MINIMUM REQUIRED CENTER BEAM CANDLE POWER RATING.

B. SPREAD = MINIMUM REQUIRED BEAM SPREAD; 3".

°K = REQUIRED COLOR TEMPERATURE RATING.

°K +/- = MINIMUM ALLOWABLE COLOR TEMPERATURE SHIFT.

I. PROVIDE SUBMITTAL DATA PER THE GENERAL SPECIFICATION REQUIREMENTS FOR EACH TYPE OF LAMP USED ON THE PROJECT CONSISTING OF A LAMP MANUFACTURER'S CUT SHEET WITH ALL INFORMATION INCLUDED IN LAMP SCHEDULE. INCLUDE THE LAMP SCHEDULE IDENTIFIER ON EACH SHEET.

FOR ALL MERCURY-CONTAINING LAMPS, SUBMITTAL MUST ALSO INCLUDE DOCUMENTATION SHOWING MERCURY CONTENT IN MILLIGRAMS PER LAMP (mg/lamp). INFORMATION SHALL BE OBTAINED FROM MSDSs OR DIRECTLY FROM MANUFACTURER. PLEASE NOTE THAT MERCURY VALUES GENERATED BY TCLP TESTS ARE NOT ACCEPTABLE AS THEY ARE RECORDED IN MILLIGRAMS PER LITER (mg/L) OF TEST SOLUTION AND DO NOT REFLECT TOTAL MERCURY CONTENT OR MERCURY CONCENTRATION IN THE LAMP.



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

K1 CONSORTIUM
1532 E Warner Ave - Santa Ana, CA 92705
(714) 665-4200 - (714) 665-4215 Fax
www.konsortium1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. ONWEILER
No. E15610
ELECTRICAL
STATE OF CALIF

# CENTRAL MONITORING SYSTEM SPECIFICATIONS

PART 1 – GENERAL REQUIREMENTS

GENERAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING OF ALL FINAL DESIGN, AGENCY APPROVALS, PLAN CHECK FEES, LABOR, EQUIPMENT, MATERIALS, AND PERFORMANCE OF OPERATIONS IN CONNECTION WITH THE INSTALLATION OF A COMPLETE AND FULLY FUNCTIONING CODE APPROVED CENTRAL MONITORING SYSTEM.

THE COMPLETE INSTALLATION SHALL CONFORM TO APPLICABLE SECTIONS OF NFPA–72 2010 EDITION OR LATEST ADOPTED VERSION, LOCAL CODE REQUIREMENTS AND NATIONAL ELECTRICAL CODE.

IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMMATIC, "DESIGN–BUILD" FORMAT, FOR THE CONTRACTOR TO DESIGN, PROVIDE AND INSTALL A COMPLETE AND FULLY FUNCTIONING, CODE APPROVED CENTRAL MONITORING SYSTEM. IN THE EVENT THAT ADDITIONAL DETAILS OR SPECIAL CONSTRUCTION IS REQUIRED FOR WORK INDICATED OR SPECIFIED IN THIS SECTION, OR WORK SPECIFIED IN OTHER SECTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIAL AND EQUIPMENT WHICH IS USUALLY FURNISHED WITH SUCH SYSTEMS, IN ORDER TO PROVIDE A COMPLETE AND FULLY FUNCTIONING INSTALLATION, WHETHER MENTIONED HEREIN OR NOT.

DESIGN REQUIREMENTS: THE CENTRAL MONITORING SYSTEM SHALL BE RESPONSIBLE FOR CONTINUALLY SUPERVISING AND MONITORING BY ZONE, THE FOLLOWING INITIATING, SIGNALING AND MONITORING CIRCUITS (AT A MINIMUM):

- MANUAL FIRE PULL STATIONS.
- SMOKE AND HEAT DETECTORS – INCLUDING THOSE REQUIRED UNDER OTHER SECTIONS. (FOR HVAC, SHUTOFF, SMOKE FIRE DAMPER CONTROL ETC.)
- SPRINKLER FLOW / TAMPER SWITCHES – INCLUDING THOSE IN OTHER SECTIONS.
- PIV / OS&Y DEVICES – INCLUDING THOSE INSTALLED IN OTHER SECTIONS.
- ALARM SIGNALING CIRCUITS.
- REMOTE ANNUNCIATOR.

SYSTEM CONTROLS SHALL BE UL LISTED FOR POWER LIMITED APPLICATIONS PER NEC (OR CEC WHERE ADOPTED) ART. 760.41. SYSTEM SHALL BE CAPABLE OF COMMUNICATING WITH AN OFFICE SITE CENTRAL MONITORING SYSTEM.

ALL WIRING SHALL BE INSTALLED IN CONCEALED CONDUIT. ROUTE FIRE ALARM SYSTEM WIRING IN SEPARATE CONDUITS FROM ALL OTHER WIRING. ADDITIONALLY:

1. WHEN CONDUIT CANNOT BE CONCEALED, CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ARCHITECT/ENGINEER TO PROVIDE SURFACE RACEWAYS OR CONDUITS PRIOR TO ANY ROUGH–IN. SURFACE RACEWAYS AND CONDUITS SHALL BE PROPERLY PREPARED AND PAINTED– COLOR AS SELECTED BY ARCHITECT/ENGINEER.
2. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, CONDUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.
3. VISUALLY OBJECTIONABLE CONDUITS SHALL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.

SYSTEM SHALL UTILIZE INTELLIGENT ANALOG ADDRESSABLE SENSORS. ALL OPEN AREA SENSORS SHALL BE LOW PROFILE DESIGN (MAXIMUM ALLOWABLE HEIGHT 2.25").

CONTROL PANEL SHALL EMPLOY AUTOMATIC DRIFT COMPENSATION OF SMOKE DETECTORS. CONTROL PANEL SHALL MEET THE REQUIREMENTS OF NFPA CHAPTER 7 FOR CALIBRATED TEST.

MANUAL STATIONS SHALL BE DUAL ACTION WITH A KEYED RESET. KEY SHALL MATCH THE CONTROL PANEL. STATIONS SHALL BE ADA 5 LB. PULL FORCE APPROVED.

ALL AUDIO VISUAL DEVICES SHALL BE MANUFACTURERS STANDARD WHITE UNLESS OTHERWISE NOTED.

PROVIDE ALL NECESSARY CONDUIT(S) AND CONDUCTORS AS REQUIRED TO CONNECT DEVICES REQUIRED TO BE MONITORED BY THE LOCAL AUTHORITIES HAVING JURISDICTION. THESE INCLUDE, BUT ARE NOT LIMITED TO, PIV(S), BACKFLOW PREVENTER(S), DETECTOR CHECK VALVE(S), OS&Y VALVE(S) ETC. REFER TO CIVIL/PLUMBING DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES OF THESE DEVICES.

CONTROL PANEL SHALL BE FIELD PROGRAMMABLE WITHOUT THE USE OF A LAP TOP COMPUTER OR OTHER SPECIAL INSTRUMENTS.

REQUIRED APPROVALS: THE CENTRAL MONITORING SYSTEM SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY IN ADDITION TO ANY OTHER REQUIRED APPROVALS. THIS APPROVAL SHALL BE OBTAINED PRIOR TO THE SUBMITTAL OF SHOP DRAWING DOCUMENTATION TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.

INSTALLATION OF THE CENTRAL MONITORING SYSTEM SHALL NOT BE STARTED UNTIL DRAWINGS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS OF FIRE ALARM COMPONENTS, ARE SUBMITTED TO AND APPROVED BY THE LOCAL FIRE MARSHAL. WRITTEN CERTIFICATION BY FIRE ALARM EQUIPMENT DISTRIBUTOR OR MANUFACTURER SHALL BE SUBMITTED TO THE ARCHITECT AND THE STATE FIRE MARSHAL STATING THAT THE NEW SYSTEM AND ITS COMPONENT PARTS ARE AS "APPROVED AND LISTED" BY THE STATE FIRE MARSHAL AND THAT INSTALLATION CONFORMS IN ALL RESPECTS TO REQUIREMENTS SET FORTH IN ARTICLE 72, TITLE 24, PART 2, CALIFORNIA CODE OF REGULATIONS. FIRE ALARM SYSTEM CONSTRUCTION SHALL NOT BE STARTED UNTIL FIRE ALARM DRAWINGS ARE APPROVED BY AHJ AND ENGINEER.

SYSTEM PERFORMANCE: FURNISH AND INSTALL A COMPLETE CENTRAL MONITORING SYSTEM AS DESCRIBED HEREIN AND AS INDICATED ON DRAWINGS TO BE WIRED, CONNECTED, AND LEFT IN FIRST CLASS OPERATING CONDITION. SYSTEM SHALL USE CLOSED LOOP INITIATING DEVICE CIRCUITS WITH INDIVIDUAL ZONE SUPERVISION, INDIVIDUAL INDICATING APPLIANCE CIRCUIT SUPERVISION, INCOMING AND STANDBY POWER SUPERVISION. INCLUDE A CONTROL PANEL, MANUAL PULL STATIONS, AUTOMATIC FIRE DETECTORS, HORNS, BELLS, FLASHING LIGHTS, ANNUNCIATOR, ALL WIRING, CONNECTIONS TO DEVICES, OUTLET BOXES, JUNCTION BOXES, AND ALL OTHER NECESSARY MATERIAL FOR A COMPLETE OPERATING SYSTEM.

SUBMITTALS: SUBMIT IN ACCORDANCE WITH PROJECT GENERAL REQUIREMENTS SPECIFICATIONS. SHOW EQUIPMENT LOCATIONS, WIRING SCHEMATICS, DETAILS, PANEL CONFIGURATION AND SIZES AND A POINT–TO–POINT SCHEMATICS OF CIRCUITS AND ZONE SCHEDULES. INCLUDE FRONT ELEVATIONS, CABINET DIMENSIONS, TYPE OF MOUNTING, DOORS, BARRIERS, CATALOG NUMBER OF LOCKS AND FINISHES FOR ALL TERMINAL CABINETS. SHOW INTERFACES TO EQUIPMENT FURNISHED BY OTHERS, IDENTIFYING NUMBERS OF WIRES AND TERMINATION REQUIREMENTS. PROVIDE MANUFACTURER CUT SHEETS FOR ALL SYSTEM COMPONENTS INDICATING UL AND CSFM LISTINGS, GENERIC CUT SHEETS ARE UNACCEPTABLE – EACH CUT SHEET SHALL INDICATE/IDENTIFY SPECIFIC COMPONENTS ALONG WITH ANY REQUIRED COMPONENT OPTIONS/ACCESSORIES UTILIZED ON THE PROJECT. PROVIDE COMPLETE SEQUENCE OF OPERATIONS OF SYSTEM. PROVIDE COMPLETE SYSTEM WIRING DIAGRAMS FOR COMPONENTS CONNECTED TO SYSTEM AND INTERFACES TO EXISTING EQUIPMENT. PROVIDE A COPY OF ANY STATE OR LOCAL FIRE ALARM SYSTEM EQUIPMENT APPROVALS. PROVIDE ONE COPY OF ACCEPTANCE TEST PROCEDURES FOR REVIEW.

CERTIFICATION OF INSTALLATION COMPANY:

A. PROOF THAT THE FIRE ALARM CONTRACTOR IS UNDERWRITERS LABORATORIES, INC. (UL) LISTED UNDER THE CLASSIFICATION OF "PROTECTIVE SIGNALING SERVICES– LOCAL, AUXILIARY, REMOTE STATION AND PROPRIETARY (UUJS) AND CENTRAL STATION PROTECTIVE SIGNALING SERVICES (UUFX).

B. COPY OF THE FOLLOWING (NICET) CERTIFICATES. PROOF THAT THE CERTIFICATE HOLDERS ARE A PART OF THE FIRE ALARM CONTRACTOR'S LOCAL FACILITY SERVICING THIS PROJECT AND WILL INSTALL THE FIRE ALARM SYSTEM. NON–NICET INSTALLERS MAY BE UTILIZED ON THE PROJECT TO ASSIST NICET–CERTIFIED INSTALLER ONLY IF DIRECTLY SUPERVISED BY NICET–CERTIFIED INSTALLER. THE RATIO OF NICET–TO–NON–NICET INSTALLERS SHALL NOT EXCEED 1:3.
   1. CERTIFIED NICET TECHNICIAN LEVEL 2 (INSTALLER).
   2. CERTIFIED NICET TECHNICIAN LEVEL 4 (SUPERVISOR).

C. QUALITY ASSURANCE: WORK SHALL BE PERFORMED BY A QUALIFIED SYSTEMS CONTRACTOR HOLDING A C–10 LICENSE.

WARRANTY: CONTRACTOR SHALL WARRANT COMPLETED CENTRAL MONITORING SYSTEM WIRING AND EQUIPMENT TO BE FREE FROM INHERENT MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF COMPLETION AND CERTIFIED TEST, OR FROM DATE OF FIRST BENEFICIAL USE. THE EQUIPMENT MANUFACTURER SHALL MAKE AVAILABLE TO THE OWNER A MAINTENANCE CONTRACT PROPOSAL TO PROVIDE A MINIMUM OF 2 INSPECTIONS AND TESTS PER YEAR IN COMPLIANCE WITH NFPA–72H GUIDELINES.

PART II – EXECUTION

ZONING: THE BUILDING SHALL BE DIVIDED INTO ZONES FOR ALARM ANNUNCIATION AND SYSTEM CONFIGURATION PER THE REQUIREMENTS OF THE LOCAL FIRE MARSHAL AND/OR AUTHORITY. A ZONE WILL BE ASSIGNED FOR EACH SPRINKLER FLOW SWITCH AND EACH TAMPER SWITCH. AIR–HANDLING SYSTEMS REQUIRING IN–DUCT DETECTION SHALL BE ZONED PER UNIT. UNIT SHALL BE SHUT DOWN DIRECTLY BY AUXILIARY RELAY CONTROLLED BY DUCT SMOKE DETECTOR.

ACCEPTANCE TESTING: FINAL ACCEPTANCE WILL BE GIVEN AFTER SUCCESSFUL ACCEPTANCE TESTING AND SUBMISSION OF APPROVED AS–BUILT DOCUMENTATION AND OPERATION AND MAINTENANCE MANUALS. ACCEPTANCE TESTING OF FIRE DETECTION SYSTEM SHALL BE AS REQUIRED BY THE STATE FIRE MARSHAL AND LOCAL AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING REQUIRED TESTING, COORDINATING SCHEDULING, AND CONDUCTING TEST NECESSARY TO ACHIEVE OCCUPANCY CERTIFICATION. TESTS SHALL INCLUDE THE FOLLOWING:

- AN OPERATION OF EACH INITIATING DEVICE.
- AN OPERATION OF EACH INDICATING DEVICE (ALARM, HORN, AND ALARM LAMP).
- OPERATION OF ALL FEATURES OF SYSTEM UNDER NORMAL OPERATION.
- OPERATION OF SUPERVISORY FEATURES OF SYSTEM.
- OPERATION OF SYSTEM ON STANDBY POWER WITH PRIMARY POWER OFF.

UPON COMPLETION OF INSTALLATION OF CENTRAL MONITORING/FIRE ALARM EQUIPMENT, ELECTRICAL CONTRACTOR SHALL PROVIDE TO THE ENGINEER A SIGNED, WRITTEN STATEMENT CONFIRMING THAT THE FIRE ALARM EQUIPMENT WAS INSTALLED IN ACCORDANCE WITH SPECIFICATIONS, WIRING DIAGRAMS, INSTRUCTIONS AND DIRECTIONS PROVIDED BY MANUFACTURER. A COMPLETE DESCRIPTION OF NATURE AND SCOPE OF TRAINING PROGRAM FOR MAINTENANCE TECHNICIANS, OPERATORS, SYSTEM USERS, AND MANAGEMENT PERSONNEL SHALL BE PROVIDED. CONTRACTOR SHALL PROVIDE A COMPLETE TRAINING PROGRAM FOR SYSTEM USERS, AND A MINIMUM OF 4 COPIES OF OPERATING INSTRUCTIONS. IN ADDITION, CONTRACTOR SHALL PROVIDE A TRAINING PROGRAM FOR THE OWNER'S MAINTENANCE PERSONNEL. THIS TRAINING SHALL BE PROVIDED FOR A MINIMUM OF 3 PERSONS WITHIN ONE YEAR OF COMPLETION DATE. COSTS FOR INSTRUCTION SHALL BE PAID BY CONTRACTOR. TRAINING SHALL BE SCHEDULED AND COORDINATED BY THE OWNER.

NFPA 72, CHAPTER 7, INSPECTION TESTING AND MAINTENANCE (1993) COMPLETE THE INSPECTION AND TESTING FORM IN ITS ENTIRETY. SUBMIT A COPY TO THE OWNER, ARCHITECT AND FIRE AUTHORITY.

PART III – PRODUCTS (CMCP)

CENTRAL MONITORING EQUIPMENT SHALL BE U.L. LISTED AND C.S.F.M. LISTED. CATALOG AND MODEL NUMBERS LISTED ARE INTENDED TO ESTABLISH TYPE AND QUALITY OF EQUIPMENT AND SYSTEM DESIGN AS WELL AS OPERATING FEATURES REQUIRED. MANUFACTURER'S SPECIFICATION SHEETS OF EACH ITEM SO LISTED SHALL BE CONSIDERED TO BE A PART OF THESE SPECIFICATIONS AND BINDING HEREIN. ANY DEVIATION FROM INTENDED FUNCTIONS OF SYSTEM SPECIFIED MAY NOT BE APPROVED, AT OPTION OF THE OWNER/ENGINEER.

EQUIPMENT SUBSTITUTIONS MUST BE PRE–APPROVED BY THE ELECTRICAL ENGINEER (10) DAYS PRIOR TO THE BID DATE. CONTRACTOR MUST SHOW OPERATION OF EQUIPMENT AND COMPLIANCE WITH ALL FUNCTIONS AND FEATURES SPECIFIED. EQUIPMENT SUBSTITUTIONS NOT PRE–APPROVED PRIOR TO BID DATE WILL BE REJECTED.

CENTRAL MONITORING CONTROL PANEL (CMCP): WHERE INDICATED ON DRAWINGS, PROVIDE AND INSTALL A CENTRAL MONITORING CONTROL PANEL. CONSTRUCTION SHALL BE MODULAR WITH SOLID STATE, MICROPROCESSOR–BASED ELECTRONICS.

FIRE ALARM SYSTEM POWER SUPPLY(FAPS): THE FAPS IS A DEVICE DESIGNED FOR USE AS EITHER A REMOTE 24 VOLT POWER SUPPLY OR USED TO POWER NOTIFICATION APPLIANCES. THE FAPS SHALL OFFER UP TO 6.0 AMPS (4.0 AMPS CONTINUOUS) OF REGULATED 24 VOLT POWER. IT SHALL INCLUDE AND INTEGRAL CHARGER DESIGNED TO CHARGE 7.0 AMP HOUR BATTERIES AND TO SUPPORT 60 HOUR STANDBY. THE FAPS SHALL HAVE TWO INPUT TRIGGERS. THE INPUT TRIGGER SHALL BE A NOTIFICATION APPLIANCE CIRCUIT (FROM THE FIRE ALARM CONTROL PANEL) OR A RELAY. FOUR OUTPUTS (TWO STYLE Y OR 2 AND TWO STYLE Y) SHALL BE AVAILABLE FOR CONNECTION TO THE NOTIFICATION DEVICES. THE FAPS SHALL INCLUDE THE ABILITY TO DELAY THE AC FAIL DELAY PER NFPA REQUIREMENTS.

ANNUNCIATOR/NETWORK SYSTEM ANNUNCIATOR: WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ, PROVIDE AND INSTALL A CHARACTER DISPLAY REMOTE ANNUNCIATOR. REMOTE ANNUNCIATOR SHALL BE ELECTRICALLY SUPERVISED FROM CONTROL PANEL. REMOTE ANNUNCIATOR SHALL BE INSTALLED IN A FLUSH OR SURFACE MOUNTED CABINET WITH HINGED DOOR AND LOCK. COORDINATE FINAL LOCATION OF ALL ANNUNCIATORS WITH THE ARCHITECT AND LOCAL AHJ PRIOR TO ROUGH–IN.

FATC: PROVIDE FIRE ALARM TERMINAL CABINET AS REQUIRED OR AS SHOWN ON DRAWINGS.

HORN/STROBE: HORN/STROBE DEVICES SHALL BE WALL OR CEILING MOUNTED PER THE DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SOUNDER/STROBE SHALL OPERATE ON 24 VDC POLARIZED CIRCUIT AND SHALL BE PROVIDED WITH A SEMI–FLUSH MOUNTING PLATE. STROBE LIGHT SHALL BE WHITE LEXAN WITH "FIRE" ON 2 SIDES. HORN SHALL HAVE A MINIMUM SOUND OUTPUT OF 100 DB AT 10'–0". THE STROBE SHALL HAVE A CANDELA DISTRIBUTION/RATING TO MEET ADA REQUIREMENTS.

SPRINKLER BELL: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. INCLUDE ALL COSTS IN BASE BID TO PROVIDE AND INSTALL A FLUSH HORN OR BELL PER THE EXTERIOR FLUSH HORN DETAIL. AN EXPOSED EXTERIOR BELL OR HORN IS NOT ACCEPTABLE UNLESS ITS USE IS DIRECTED BY THE LOCAL FIRE MARSHALL. THE FIRE ALARM CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE USE OF SURFACE MOUNTED BELLS/HORNS PRIOR TO ROUGH–IN.

MANUAL STATIONS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. DEVICE SHALL BE ADDRESSABLE UNLESS OTHERWISE NOTED. STATION SHALL BE KEYED ALIKE AS THE CONTROL PANEL.

SMOKE DETECTORS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SENSORS SHALL BE ANALOG ADDRESSABLE TYPE.

DUCT SMOKE DETECTORS: DUCT SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE AND THE INSTALLATION MUST COMPLY WITH NFPA–90A. PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ.

HEAT DETECTORS: FURNISH AND INSTALL WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. SENSORS SHALL BE ADDRESSABLE.

BEAM DETECTORS: BEAM DETECTORS SHALL BE REFLECTIVE TRANSMITTER/RECEIVER TYPE WITH INTEGRAL SENSITIVITY TRANSMITTING AN INFRARED SIGNAL TO A REFLECTIVE SURFACE OR RECEIVER. THE BEAM DETECTOR SHALL HAVE A KEYED REMOTE TEST AND ALARM INDICATOR MOUNTED WITHIN 100 FEET OF THE BEAM DETECTOR. FINAL LOCATION TO BE DETERMINED BY ARCHITECT. THE BEAM DETECTOR SHALL HAVE AN INTEGRAL OPTICS ALIGNMENT (TOOL) BUILT IN THE TRANSMITTER. AN ADDRESSABLE, 4 WIRE MONITORING MODULE SHALL COMMUNICATE THE ALARM AND TROUBLE INDICATIONS OF THE BEAM DETECTOR BACK TO THE FIRE ALARM CONTROL PANEL OR TRANSPONDER.

WATERFLOW SWITCHES: WATERFLOW SWITCHES SHALL BE PROVIDED WITH A TAPPED 1/2" CONDUIT CONNECTION. THE FLOW SWITCH SHALL BE UL LISTED FOR ITS INTENDED PURPOSE. DEVICE TO BE FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR.

TAMPER SWITCHES: SPRINKLER VALVE TAMPER SWITCHES COVER REMOVAL SHALL BE SUPERVISED. SWITCH SHALL BE PROVIDED WITH EITHER ONE OR 2 SETS OF S.P.D.T. MICRO SWITCHES AS REQUIRED. TAMPER SWITCH SHALL BE UL LISTED FOR ITS INTENDED PURPOSE. DEVICE TO BE FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR.

MONITOR MODULE: MONITOR RELAYS FOR MONITORING SMOKE DOORS, GENERATORS, AUTOMATIC TRANSFER SWITCHES, FIRE SUPPRESSION SYSTEMS, ETC. AND WHERE INDICATED ON THE DRAWINGS OR AS REQUIRED BY LOCAL AHJ.

CONTROL MODULE: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ

MAGNETIC DOOR HOLDER: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ.

RELAY MODULE: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. RELAY(S) SHALL BE RATED FOR CONTINUOUS MOTOR OR INDUCTIVE LOADS SUCH AS COMBINATION SMOKE FIRE DAMPERS (CSFDs), MAGNETIC HOLD OPENS, ETC. QUANTITY OF RELAYS SHALL BE BASED ON PROJECT–SPECIFIC CSFD LOADS WHICH SHALL NOT EXCEED 80% OF MOTOR LOAD RATING OF THE RELAY. INCLUDE ALL COSTS IN BASE BID TO ADD ADDITIONAL 120V CONDUCTORS AS REQUIRED TO PARTITION LOADS ON INDIVIDUAL RELAYS TO MEET THE 80% RELAY MOTOR LOAD LIMIT.

RELAY MODULE: PROVIDE WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. RELAY(S) SHALL BE RATED FOR CONTINUOUS MOTOR OR INDUCTIVE LOADS SUCH AS COMBINATION SMOKE FIRE DAMPERS (CSFDs), MAGNETIC HOLD OPENS, ETC. QUANTITY OF RELAYS SHALL BE BASED ON PROJECT–SPECIFIC CSFD LOADS WHICH SHALL NOT EXCEED 80% OF MOTOR LOAD RATING OF THE RELAY. INCLUDE ALL COSTS IN BASE BID TO ADD ADDITIONAL 120V CONDUCTORS AS REQUIRED TO PARTITION LOADS ON INDIVIDUAL RELAYS TO MEET THE 80% RELAY MOTOR LOAD LIMIT.

REMOTE LED: PROVIDE REMOTE LED AND/OR REMOTE LED/TEST STATION WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY LOCAL AHJ. DEVICE LOCATION SHALL BE COORDINATED WITH LOCAL AHJ AND ARCHITECT PRIOR TO ROUGH–IN.

UNIVERSAL DIGITAL ALARM COMMUNICATOR TRANSMITTER (UDACT): THE UDACT IS AN INTERFACE FOR COMMUNICATING DIGITAL INFORMATION BETWEEN A CENTRAL MONITORING CONTROL PANEL AND A UL LISTED CENTRAL STATION.

1. THE UDACT SHALL BE COMPACT IN SIZE, MOUNTING IN A STANDARD MODULE POSITION OF THE FIRE ALARM CONTROL CABINET. THE CONNECTION BETWEEN THE UDACT AND THE CONTROL PANEL SHALL BE COMPLETELY SUPERVISED.
2. THE UDACT SHALL INCLUDE CONNECTIONS FOR DUAL TELEPHONE LINES (WITH VOLTAGE DETECT), PER UL/NFPA REQUIREMENTS. IT SHALL INCLUDE THE ABILITY FOR SPLIT REPORTING OF PANEL EVENTS.
3. THE UDACT SHALL BE COMPLETELY FIELD PROGRAMMABLE FROM A BUILT–IN KEYPAD AND 4 CHARACTER RED, SEVEN SEGMENT DISPLAY.
4. THE UDACT SHALL BE CAPABLE OF TRANSMITTING EVENTS IN AT LEAST 9 DIFFERENT FORMATS. THIS ENSURES COMPATIBILITY WITH EXISTING AND FUTURE TRANSMISSION FORMATS. ACCEPTED FORMATS INCLUDE 3+1 STANDARD, 4+1 STANDARD, ADEMCO CONTACT ID OR 4+1 AND 4+2 ADEMCO.
5. COMMUNICATION SHALL INCLUDE VITAL SYSTEM STATUS SUCH AS:
   - INDEPENDENT ZONE (ALARM, TROUBLE, NON–ALARM)
   - INDEPENDENT ZONE SUPERVISORY SIGNAL
   - AC (MAINS) POWER LOSS
   - LOW BATTERY AND EARTH FAULT
   - SYSTEM OFF NORMAL
   - 12 AND 24 HOUR TEST SIGNAL
   - ABNORMAL TEST SIGNAL (PER UL REQUIREMENTS)
   - EIA–485 COMMUNICATIONS FAILURE
6. THE UDACT SHALL INCLUDE INDEPENDENT ZONE/POINT REPORTING IN THE CONTACT ID FORMAT. IN THIS FORMAT THE UDACT SHALL SUPPORT TRANSMISSION OF UP TO 2,040 POINTS. THIS ENABLES THE CENTRAL STATION TO HAVE EXACT DETAILS CONCERNING THE ORIGIN OF THE FIRE OR RESPONSE EMERGENCY.
7. UDACT PROVISIONING SHALL BE INCLUDED IN THE BASE BID BASED ON THE FOLLOWING ASSUMPTIONS:

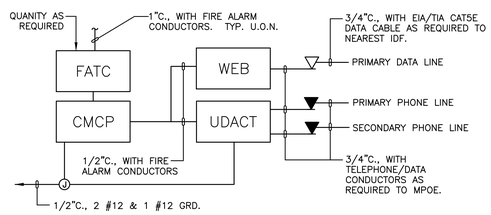
   ASSUME THE FOLLOWING INFORMATION WILL BE PROVIDED BY THE OWNER TO PROGRAM AN INSTALLED UDACT TO A THIRD–PARTY CENTRAL STATION:

   a. MONITORING ACCOUNT NUMBER
   b. PRIMARY RECEIVER PHONE NUMBER
   c. SECONDARY RECEIVER PHONE NUMBER
   d. RECEIVER TYPE
   e. TRANSMISSION FORMAT
   f. MONITORING COMPANY NAME
   g. MONITORING COMPANY MAIN PHONE
   h. CONTACT PERSON AT MONITORING COMPANY

   ASSUME THIRD–PARTY CENTRAL STATION PROVIDER SHALL PROVIDE 72 HOURS ADVANCE NOTICE FOR FIRE ALARM CONTRACTOR/INSTALLER TO BE PRESENT FOR UDACT PROGRAMMING, PRE–TESTING, TESTING, AND CONNECTION.

   ASSUME A REPRESENTATIVE FROM THE THIRD–PARTY CENTRAL STATION IS REQUIRED AT LOCATION AT TIME OF PROGRAMMING, PRETEST & CONNECTION. ADDITIONALLY, THIRD–PARTY CENTRAL STATION PROVIDER SHALL PROVIDE ANY MONITORING REPORTS REQUIRED BY THE FIRE DEPARTMENT. A SEPARATE PERMIT WILL BE SUBMITTED AND PAID FOR BY THE THIRD PARTY CENTRAL STATION PROVIDER.

   WEB SERVER (WS): THE WEB SERVER IS AN INTERFACE FOR COMMUNICATING SYSTEM EVENTS VIA OWNER LOCAL AREA NETWORK. WEB SERVER SHALL BE CONFIGURED WITH A FIXED IP ADDRESS (FURNISHED BY OWNER–IMPLEMENTED BY CONTRACTOR) TO ALLOW AUTOMATIC EMAIL OR CELL PHONE TEXT MESSAGING IN RESPONSE TO ANY SYSTEM EVENT. ADDITIONAL WEB SERVER SHALL ALLOW VIEWING OF SYSTEM STATUS, SYSTEM EVENT HISTORY AND DEVICE PROPERTIES BASED ON ACCESS PERMISSIONS DEFINED BY THE OWNER. CONTRACTOR SHALL INCLUDE 8 HOURS OF SERVER CONFIGURATION BASED ON OWNER INPUT COMBINED WITH CONFIGURATION TRAINING FOR THE OWNER'S REPRESENTATIVES IN BASE BID.




## CENTRAL MONITORING SYSTEM SCHEMATIC

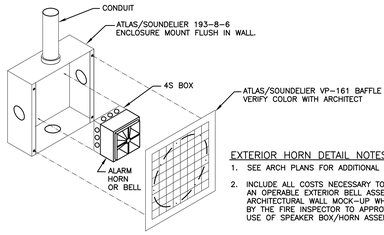
## CENTRAL MONITORING SYSTEM PRODUCTS

SYSTEM SHALL BE BY NOTIFIER AS DISTRIBUTED BY NESCO AFFILIATE. CONTACT TRI–SIGNAL INTEGRATION, INC. (818) 566–8558. CONTACT: GENE KNUST–GRAICHEN

| | |
|---|---|
| CMCP: | NOTIFIER #NFS–320 – FOR USE IN ONE THRU THREE STORY BUILDING WITH OR WITHOUT VEC REQUIREMENT.<br>NOTIFIER #NFS2–640 – FOR USE IN ONE THRU FIVE STORY BUILDINGS WITH OR WITHOUT VEC REQUIREMENT.<br>NOTIFIER #NFS2–3030 – FOR USE IN ONE THRU FIVE STORY BUILDINGS WITH ELEVATORS IN A CAMPUS ENVIRONMENT WITH OR WITHOUT VEC REQUIREMENT. |
| PACP: | NOTIFIER TYPE #RP 2001 |
| ANNUNCIATOR: | NOTIFIER TYPE FDU–80 (FOR USE WITH NFS–320 & NFS2–640)<br>NOTIFIER TYPE LCD–160 (FOR USE WITH NFS2–3030) OR LDM–32 CUSTOM GRAPHICS PANEL (WHERE REQUIRED BY LOCAL AHJ OR INDICATED ON PLANS)<br>NOTIFIER TYPE NCA–2 (FOR USE AS CAMPUS/NETWORK ANNUNCIATOR) |
| FATC: | 18"x 18"x 4" METAL CABINET WITH SCREW COVER (FOR USE WITH NFS–320)<br>24"x 24"x 6" METAL CABINET WITH SCREW COVER (FOR USE WITH NFS2–640 & NFS2–3030) |
| POWER SUPPLY(FAPS): | NOTIFIER #FCPS–24S8<br>NOTIFIER #ACPS–610 |
| HORN / STROBE: | WHEELOCK #ZNS–SERIES<br>SYSTEM SENSOR #P–SERIES |
| STROBE: | WHEELOCK #ZRS–SERIES<br>SYSTEM SENSOR #S–SERIES |
| SPEAKER/ STROBE: | WHEELOCK #E70/E90– SERIES<br>WHEELOCK #ET70/ET90– SERIES<br>SYSTEM SENSOR #SP–SERIES |
| SPEAKER: | WHEELOCK #E70/E90–SERIES<br>WHEELOCK #ET70/ET90– SERIES<br>SYSTEM SENSOR #SP–SERIES |
| SPRINKLER BELL: | NOTIFIER #KMS–10–24. SEE EXTERIOR FLUSH HORN DETAIL.<br>SYSTEM SENSOR #SSM OR SSV SERIES |
| MANUAL STATION: | NOTIFIER #NBG–12LX. |
| PREACTION RELEASING STATION: | NOTIFIER #NBG–12LR W/FMM–101 |
| SMOKE DETECTORS: (RETURN AIR, AREA, IN–DUCT AREA) | NOTIFIER #FSP–851 PHOTOELECTRIC |
| DUCT DETECTORS (SMOKE): | NOTIFIER #DNR W/FSP–851R SMOKE DETECTOR HEAD |
| HEAT DETECTORS: | NOTIFIER #FST–851 |
| BEAM SMOKE DETECTORS: | NOTIFIER #FSB–200/BEAM MMK/BEAMSMK /RTS151KEY |
| WATERFLOW: | NOTIFIER #WFD SERIES. |
| TAMPER: | NOTIFIER #PIBV2 SERIES<br>NOTIFIER #OSY2 SERIES. |
| MONITOR MODULE: | NOTIFIER #FMM–1, #FDM–1, OR FMM–101 |
| CONTROL MODULE: | NOTIFIER #FCM–1 |
| ADDRESSABLE CONTROL RELAY: | NOTIFIER #FRM–1 WITH SYSTEM SENSOR #PR–1 OR #R–10T AS REQUIRED |
| MAG DOOR HOLDER: | NOTIFIER #FM SERIES |
| REMOTE LED: | NOTIFIER #RA100Z or, if required, #RTS151 series |
| COMMUNICATOR: | NOTIFIER MODEL #UDACT |
| WEB SERVER: | NOTIFIER TYPE #NWS |
| VOICE EVACUATION SYSTEM: | NOTIFIER #NFV–25/50 |
| ALL OTHER MISCELLANEOUS ITEMS: | NOTIFIER / WHEELOCK / KIRKLAND / SYSTEM SENSOR |

## FIRE ALARM/CENTRAL MONITORING SYSTEM SYMBOLS

| | |
|---|---|
| FACP | FIRE ALARM CONTROL PANEL – SEE SPECIFICATIONS. |
| CMCP | CENTRAL MONITOR CONTROL PANEL– SEE SPECIFICATIONS |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL – SEE SPECIFICATIONS. |
| FATC | FIRE ALARM TERMINAL CABINET – SEE SPECIFICATIONS. |
| FAPS | FIRE ALARM SYSTEM POWER SUPPLY/TRANSPONDER PANEL – SEE SPECIFICATIONS. |
| PACP | FIRE ALARM PRE–ACTION CONTROL PANEL – SEE SPECIFICATIONS. |
| VEC | FIRE ALARM VOICE EVACUATION SYSTEM CONTROL PANEL – SEE SPECIFICATIONS. |
| H | FIRE ALARM HORN, WALL MOUNTED – SEE SPECIFICATIONS. |
| HF | FIRE ALARM HORN/FLASHING LIGHT (ADA APPROVED), WALL MOUNTED – SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS. |
| HF | FIRE ALARM HORN/FLASHING LIGHT (ADA APPROVED), CEILING DEVICE SEE SPECIFICATIONS. CANDELA RATING AS REQUIRED TO MEET ADA COVERAGE REQUIREMENTS. |
| F | FIRE ALARM FLASHING LIGHT (ADA APPROVED), WALL MOUNTED – SEE SPECIFICATI



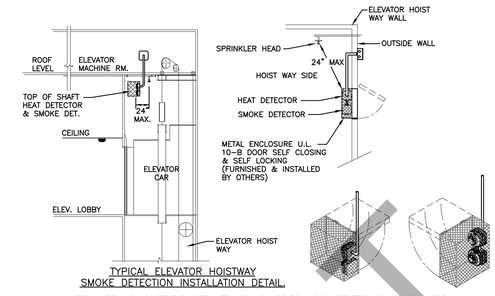

EXTERIOR HORN DETAIL NOTES:

1. SEE ARCH PLANS FOR ADDITIONAL DETAILS.
2. INCLUDE ALL COSTS NECESSARY TO INSTALL & POWER AN OPERABLE EXTERIOR BELL ASSEMBLY IN ARCHITECTURAL WALL MOCK-UP WHICH WILL BE USED BY THE FIRE INSPECTOR TO APPROVE/DISAPPROVE USE OF SPEAKER BOX/HORN ASSEMBLY.

## EXTERIOR FLUSH HORN DETAIL

SCALE: N.T.S.

2



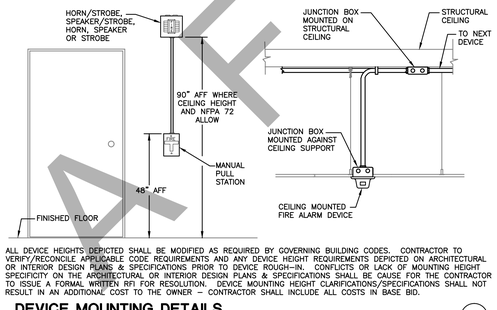

TYPICAL ELEVATOR HOISTWAY SMOKE DETECTION INSTALLATION DETAIL.

NOTE: SIZE AND LOCATE EXPANDED METAL ENCLOSURE TO AVOID INTERFERENCE WITH ELEVATOR SYSTEM. HEAT DETECTORS PROVIDED FOR ELEVATOR SHUNT TRIP SHALL BE LOCATED WITHIN 24" OF EACH SPRINKLER HEAD. HEAT DETECTORS SHALL BE PROVIDED FOR EACH SPRINKLER HEAD IN ELEVATOR HOISTWAY AND ELEVATOR MACHINE ROOM.

## ELEVATOR SHAFT FIRE ALARM DEVICE DETAIL

SCALE: N.T.S.

3

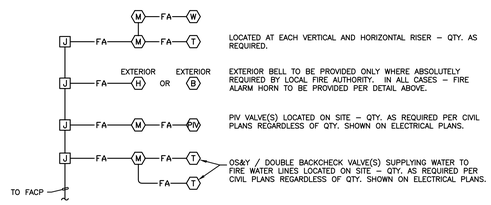



ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER – CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

## DEVICE MOUNTING DETAILS

SCALE: N.T.S.

4




## SPRINKLER SYSTEM CONNECTION SCHEMATIC

SCALE: N.T.S.

1



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

KONSORTIUM1
1522 E Warner Ave - Santa Ana, CA 92705
(714) 668-4200 - (714) 668-4215 Fax
www.konsortium1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SMALLWOOD
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

| | |
|---|---|
| DATE: | Issue Date |
| PROJECT #: | Project Number |
| SCALE: | AS NOTED |
| 0 | |

NORTH

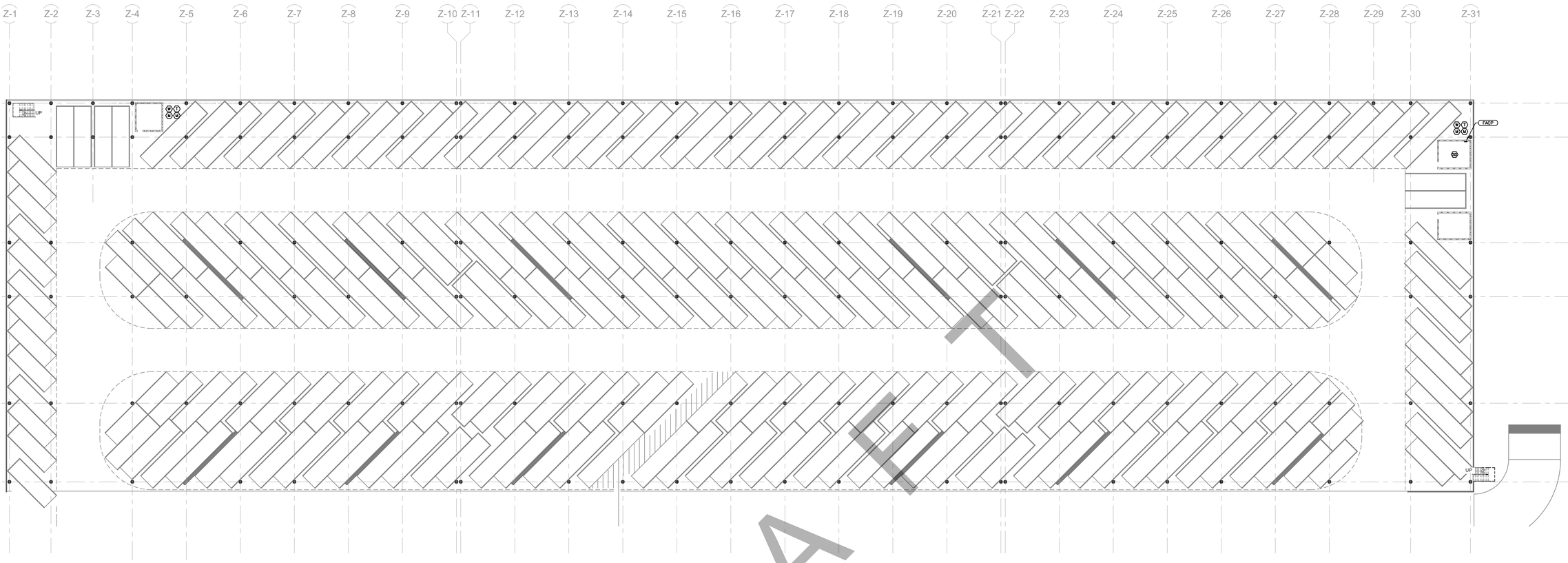
SHEET #: E-7.01

# CENTRAL MONITORING SYSTEM DETAILS



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street Suite 900
Irvine, California 92614
T 949.809.3380 F 949.809.3381
info@mve-institutional.com
www.mve-architects.com




CENTRAL MONITORING PLAN - LEVEL 1 (1)
SCALE: 3/64" = 1'-0"



# DANA POINT HARBOR REVITALIZATION

COUNTY OF ORANGE
DANA POINT HARBOR DRIVE

KONSORTIUM 1
1532 E Warner Ave - Santa Ana, CA 92705
(714) 668-4300 - (714) 668-4215 Fax
www.konsortium1.com
JERRY LEONHARDT

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWEENEY
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

| | |
|---|---|
| DATE: | Issue Date |
| PROJECT #: | Project Number |
| SCALE: | AS NOTED |
| 0 | |

NORTH

SHEET #: E-7.03

## PARKING GARAGE LVL 1 CENTRAL MONITORING PLAN



MVE Institutional
Planning Architecture Interiors

MVE Institutional, Inc.
1900 Main Street, Suite 800
Irvine, California 92614
T 949.553.3350 F 949.863.3381
Info@mve-institutional.com
www.mve-architects.com