

General:

- A. Workmanship and materials shall conform to the building code as stated below. However, where reference is made to performance conforming to other standards the more stringent shall apply.
1. County of Maui: Amended IBC, 2006
B. The contractor shall compare all the contract documents with each other and report in writing to the Officer-In-Charge all inconsistencies and omissions.
C. The contractor shall take field measurements and verify field conditions and shall compare such field measurements and conditions with the drawings before commencing work. Report in writing to Officer-In-Charge all inconsistencies and omissions.
D. The contractor shall be responsible for coordinating the work of all trades.
E. The contractor shall be responsible for methods of construction, workmanship and job safety. The contractor shall provide temporary shoring and bracing as required for stability of structural members and systems.
F. Construction loading shall not exceed design live load unless special shoring is provided. Allowable loads shall be reduced in areas where the structure has not attained full design strength.
G. The contractor shall be responsible for protection of the adjacent properties, structures, streets and utilities during the construction period.
H. Details noted as typical on the structural drawings shall apply in all conditions unless specifically shown or noted.

Design criteria:

- A. Roof live load:----- 20 psf
B. Wind design data
1. Basic wind speed (3-second gust):----- 105 mph
2. Occupancy category:----- II
3. Importance factor:----- 1.0
4. Exposure category:----- C
5. Building enclosure classification:----- Enclosed
6. Internal pressure coefficient:----- ±0.18
C. Earthquake design data:
1. Occupancy category:----- II
2. Importance factor:----- 1.0
3. Mapped spectral response accelerations
a. Short period:----- 1.0g
b. 1-sec period:----- 0.25g
4. Site class:----- D
5. Spectral response coefficients
a. Short period:----- 0.73g
b. 1-sec period:----- 0.32g
6. Design category:----- D
7. Basic seismic-force-resisting system:----- Special Reinforced Masonry Shear Walls
8. Design base shear (Ultimate)
a. Restroom:----- 13.2 kips
9. Seismic response coefficient----- 0.15
10. Response modification factor:----- 5
11. Analysis procedure:----- Equivalent Lateral Force Procedure
D. Soils
1. Allowable bearing capacity:----- 2,500 psf

Special Inspections:

- A. The contractor shall be responsible for providing special inspection of portions of the work as required by the building code at the appropriate time at no additional cost to the State. Frequency of inspection is defined in the IBC, Section 1704 Tables, as amended by the County. The contractor shall correct defective work at no additional cost to the State and pay for re-inspection as required.

Special Inspections: (Cont.)

- B. Special inspectors shall keep records of inspections. Reports shall indicate that work inspected was done in conformance with approved construction documents. The inspector shall submit a final signed report to the State and Licensed Architect or Engineer who in turn shall submit a written statement to the County certifying receipt of the final inspection letter and documenting that there are no known unresolved code requirements.
C. The following type of work listed in the IBC, Section 1704, as amended by the County of Maui, requires special inspection:
1. Inspection of fabricator/shop unless work is done by a registered and approved fabricator shop.
A. Pre-engineered trusses
2. Masonry construction
a. Placement of reinforcing steel
b. Mortar and mortar joints
c. Placement of grout
3. Complete load path and uplift ties
4. Concrete construction not required per exceptions below.
A. Exceptions: inspections not required for concrete pours for
i. Concrete footings supporting buildings three stories or less in height that are full supported on earth or rock (designed with f'c=2,500 psi)
ii. Non structural slabs support directly on ground

Foundation:

- A. Foundation design is based on the following geotechnical investigation report.
1. Geotechnical engineering exploration, Central Maui Regional Park, by Geolabs, dated October 1, 2013.
B. Contractor shall provide for de-watering of excavation from surface water, ground water or seepage.
C. Excavations for any purpose shall not remove lateral support from any footing or foundation without first underpinning or protecting the footing or foundation against settlement or lateral translation.
D. Soft and yielding areas encountered during clearing and grubbing work shall be over-excavated to expose firm natural material, and the resulting excavation backfilled with well-compacted fill.
E. Fills and backfills may consist of excavated on-site soil, less than 3 inches in size, that is not contaminated with organic matter or other deleterious materials.
F. Imported fill and backfill material shall consist of soil and rock materials less than 3 inches in size with a CBR value of 8 or more and with a maximum swell of less than 2 percent when tested in accordance with ASTM D1883. Geotechnical Engineer shall observe and/or test imported fill materials for suitability prior to being transported to the site for the intended use.
G. Fills and backfills shall be moisture-conditioned to about 2 percent above the optimum moisture, placed in level lifts not exceeding 8 inches in loose thickness, and compacted to at least 90 percent relative compaction.
H. Footings shall bear on undisturbed in-situ firm soils or compacted fill. Bottom of footings shall be compacted to provide a relatively firm and smooth bearing surface prior to placement of reinforcing steel and concrete. If soft and/or loose materials are encountered at the bottom of footing excavations, they shall be over-excavated to expose the underlying firm materials. The over-excavation shall be backfilled with well-compacted fill or the footing bottom may be extended down to the underlying competent material.
I. Excavations, fill placement and compaction for foundations shall be monitored and approved by the Geotechnical Engineer prior to placement of concrete and reinforcing steel to confirm foundation bearing conditions and required embedment depths. Geotechnical Engineer shall submit letter of compliance to the Engineer.

Concrete:

- A. Concrete construction shall conform to American Concrete Institute ACI 318
B. Concrete shall be regular weight hard rock concrete and shall have the following minimum 28 day compressive strengths:
1. Footings:----- 3,000 psi
2. Slab-on-grade:----- 3,000 psi
3. All other concrete:----- 3,000 psi

Concrete: (Cont.)

- C. Concrete delivery tickets shall record all free water in the mix: at batching by plant, for consistency by driver, and any additional request by contractor if permitted by the mix design.
D. Water used in mixing concrete shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials or other substances that are deleterious to concrete or steel reinforcement.
E. Frequency of conducting strength tests shall be as follows:
1. Samples for strength of each class of concrete placed each day shall be taken not less than once a day, nor less than once for each 150 cubic yards of concrete, nor less than once for each 5,000 square feet of surface area for slabs or walls.
2. If the total volume of concrete is such that the frequency of testing would provide less than five strength tests for a given class of concrete, tests shall be made from at least five randomly selected batches or from each batch if fewer than five batches are used.
F. All inserts, anchor bolts, plates, and other items to be cast in the concrete shall be hot-dipped galvanized according to ASTM A153 unless otherwise noted.
G. Reinforcing bars, anchor bolts, inserts, and other items to be cast in the concrete shall be secured in position prior to placement of concrete.
H. Conduits, pipes, and sleeves passing through footing and not conforming to typical details shall be located and submitted to the Officer-In-Charge for approval.
I. Conduits, pipes, and sleeves embedded within a slab (other than those merely passing through) shall satisfy the following:
1. No larger in outside dimensions than 1/3 the overall thickness of slab in which they are embedded.
2. Spaced no closer than 3 diameters or widths on center.
3. Placed in the middle 1/3 of slab thickness.
J. See architectural drawings for chamfers, edge radii, drips, reglets, finishes and other non-structural items not shown or specified on the structural drawings.
K. Non-shrink grout shall be a premixed non-metallic formula, capable of developing a minimum compressive strength of 3,000 psi in 1 day and 5,000 psi in 28 days.

Reinforcing Steel:

- A. Reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
B. Clear concrete cover for reinforcing bars shall be as follows, unless otherwise noted:
1. Concrete cast against and permanently exposed to earth:--3".
2. Concrete formed and exposed to earth or weather:
a. No. 5 bar, W31 or D31 wire, and smaller:----- 1.5"
3. Concrete not exposed to weather or in contact with ground:
a. Slabs, walls, joists:
i. No. 14 and no. 18 bar:-----1.5"
C. Clear distance between the surface of a bar and any surface of a masonry unit shall be not less than 1/2 inch, unless otherwise noted.
D. Reinforcing steel shall be spliced where indicated on plans. Provide lap splice length per typical details and schedule, unless otherwise noted.
E. Mechanical splice connectors shall develop in tension 125 percent of the specified minimum yield strength of reinforcing bars.
F. Standard hooks on reinforcing bars used shall comply with ACI 318, Section 7.1.
G. Minimum reinforcement bend diameters shall comply with ACI 318, Section 7.2

Masonry:

- A. Concrete masonry units shall conform to ASTM C90 for load-bearing concrete masonry units medium weight with a unit compressive strength of 1900 psi.
B. Mortar for use in masonry construction shall conform to ASTM C270 with a minimum compressive strength of 1,800 psi. Unused mortar shall be discarded within 2 1/2 hours after initial mixing. Mortar for masonry shall be Type S.
C. Grout shall conform to ASTM C476 with a minimum compressive strength of 2,000 psi at 28 days.
D. All cells and bond courses with reinforcement and inserts shall be solid grouted. Cleanouts shall be provided for all grout pours over 5'-4" in height.
E. When grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the grout pour 1 1/2 inches below the top of the uppermost unit.

Masonry: (Cont.)

- F. Walls shall be constructed in conventional running bond, unless otherwise noted.
G. See architectural drawings for laying pattern, height and type of units, surface texture, and joint type.
H. Open-ended blocks may be substituted for standard concrete masonry units.
I. Fabricator shall be a PCI certified plant.

Cold-Formed Steel Framing:

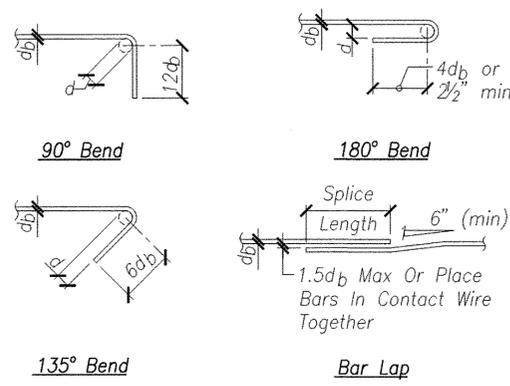
- A. Cold-formed metal framing shall comply with AISI's "North American Specifications for the Design of Cold-Formed Steel Structural Members" and its "Standard for Cold Formed Steel Framing - General Provisions"
B. Cold-formed steel members and accessories shall be of the type and thickness called for on the drawings. Member designations are per Steel Stud Manufacturer's Association.
C. All members 54, 68 or 97 mils thick shall meet the requirements of ASTM A1003 Grade ST50H. All members 33 or 43 mils thick shall meet the requirements of ASTM A1003 grade ST33H.
D. Cut framing members by sawing or shearing. Do not torch cut.
E. Prefabricated framing hardware shall be Simpson Strong Tie galvanized or approved equal. Install per manufacturer's recommendations.
F. Place a layer of 30# roofing felt between all cold-formed metal members and concrete or masonry surfaces.
G. Holes in studs and other structural members shall not exceed 1 1/2 inches in width or 4 inches in length. Holes shall be permitted only along the centerline of the web of the framing member. Holes shall not be less than 24 inches center to center and shall not be located more than 10 inches from edge of hole to end of member.
H. Screws shall be installed with a minimum edge distance and center-to-center spacing of 1/2 inch, shall be self tapping and shall conform to SAE J 78. Screws shall extend through the steel a minimum of three exposed threads. All self-drilling tapping screws conforming to SAE J 78 shall have a Type II coating in accordance with ASTM B633.
I. Stud web holes closer than 10 inches from the edge of the hole to the edge of the member shall be patched with a solid plate, stud section or track section. The patch shall be of a minimum thickness as the stud member and shall extend at least 1 inch beyond all edges of the hole. The patch shall be fastened to the web with no. 8 screws spaced no greater than 1 inch center to center along the edges of the patch, with a minimum edge distance of 1/2 inch.

Steel Deck:

- A. Steel deck and accessories shall be formed from galvanized steel sheets conforming to ASTM A653, Structural Steel (SS), Grade 40, G90 zinc coating.
B. Steel deck shall be of the profile depth and thickness as indicated on the drawings.
C. End joints shall be lapped 2 inches minimum.
D. Steel deck shall be triple span continuous where possible. Do not locate single spans at edges or corners.

Professional Engineer stamp for Jonathan D. Miral, License No. 10978-S, State of Hawaii, Department of Land and Natural Resources, Engineering Division, Central Maui Regional Sports Complex, Phase 4, Wailuku, Maui, Hawaii. Includes revision table and drawing title block.

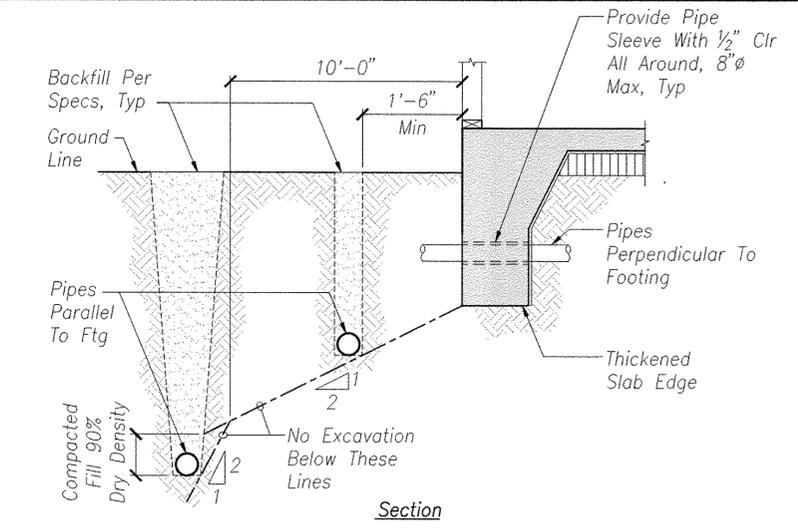
Minimum Splice and Development Lengths					
Bar Size	Concrete Strength = 3,000 psi				
	Lap Splice		Development		
	Top Bars	Other Bars	Straight		With Standard Hook
		Top bars	Other Bars		
#3	28"	22"	22"	18"	10"
#4	38"	30"	30"	22"	12"
#5	48"	36"	36"	28"	14"
#6	56"	44"	44"	34"	18"
#7	82"	64"	64"	48"	20"
#8	94"	72"	72"	56"	22"
#9	106"	82"	82"	62"	26"
#10	118"	92"	92"	70"	28"
#11	132"	102"	102"	78"	32"



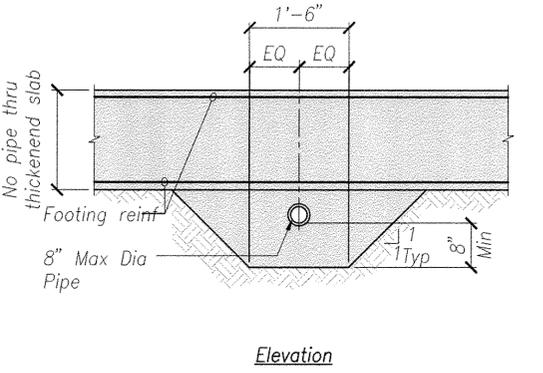
D = 6db for #8 and smaller
D = 8db for #9 to #11

Notes:
1. Lengths are for concrete with rebar spaced at 6 bar diameters minimum. Increase lengths by 25% for bars spaced less than 6 bar diameters.
2. "Top Bars" are horizontal bars with 12" or more of concrete cast below.

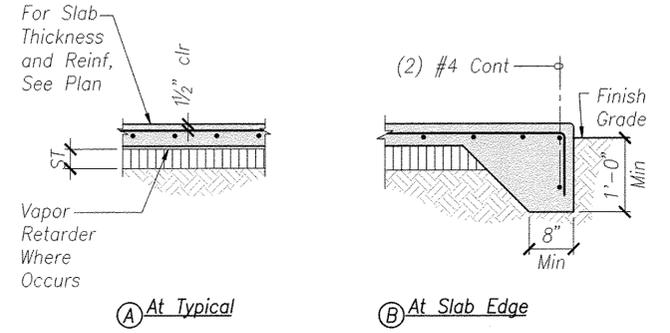
Typical Rebar Splice And Development Length Schedule
Not To Scale



Typical Pipe At Thickened Slab Detail
Not To Scale



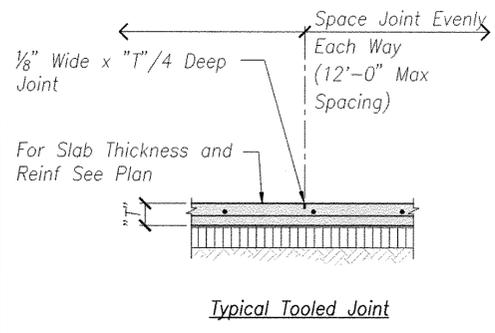
Notes:
1. For pipes perpendicular to footing at more than 3'-0" below bottom of footing, trench shall be backfilled with compacted fill per specifications.
2. Contractor shall determine exact depth and location of pipes prior to excavation for footings. Footing shall be lowered as required.



Typical Slab-on-Grade Details
Not To Scale

Subgrade Schedule				
Mark	"ST"	Material	Vapor Retarder	Remarks
SB-1	4"	3B Fine	Yes	At Interior
SB-2	4"	Base Course	No	At Exterior

Slab on Grade Notes:
1. Thickness of slab-on-grade shown are minimum and shall be maintained at all sloped and depressed areas.
2. For floor elevations and slopes to drain, see Architectural drawings.
3. Vapor Retarder shall be 10 Mil Stego Wrap or Approved Equal.

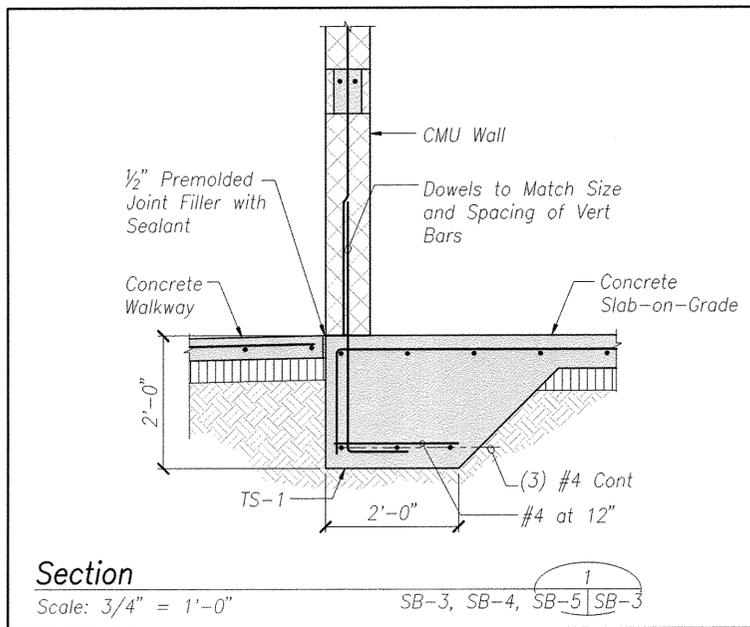


Notes:
1. Tooling shall occur as soon as concrete surface is firm enough to not be torn by blade and before shrinkage cracking occurs.

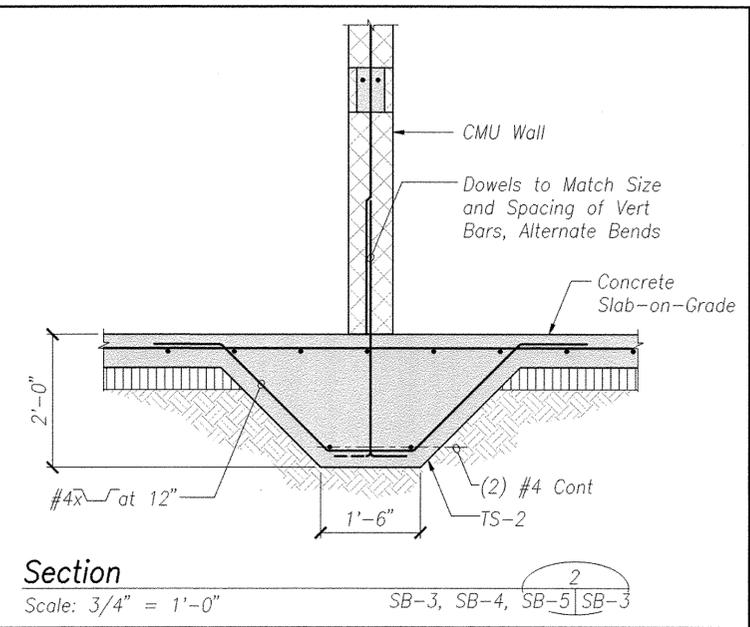
Typical Slab Joint Detail
Not To Scale

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII TYPICAL DETAILS					
		DESIGNED: JM DRAWN: CADD CHECKED: JM APPROVED:			
EXPIRATION DATE OF THE LICENSE 4/30/2018 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		SUBMITTED: -- DATE: AUGUST 2016 SCALE: AS SHOWN		DRAWING NO. SB-2	
R.M. TOWILL CORPORATION <small>Planning • Engineering • Construction Services • Programming • Landmark • Construction Management</small> 808-942-1152 2015 South King Street, Suite 200 Honolulu, Hawaii 96813-2626					

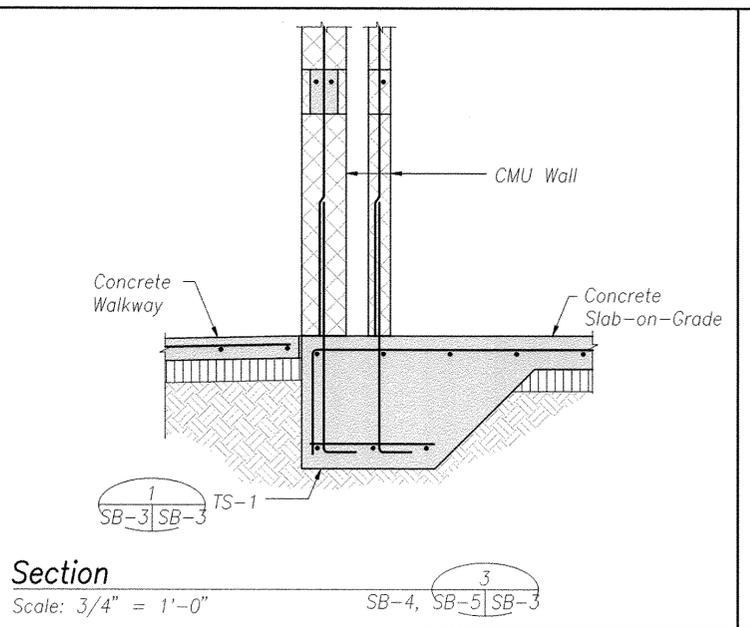
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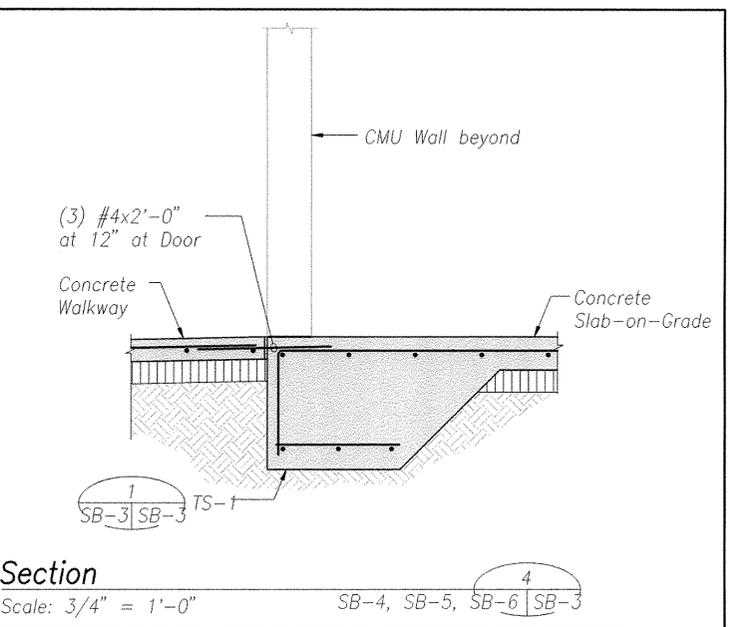
Section
Scale: 3/4" = 1'-0"
SB-3, SB-4, SB-5 | SB-3



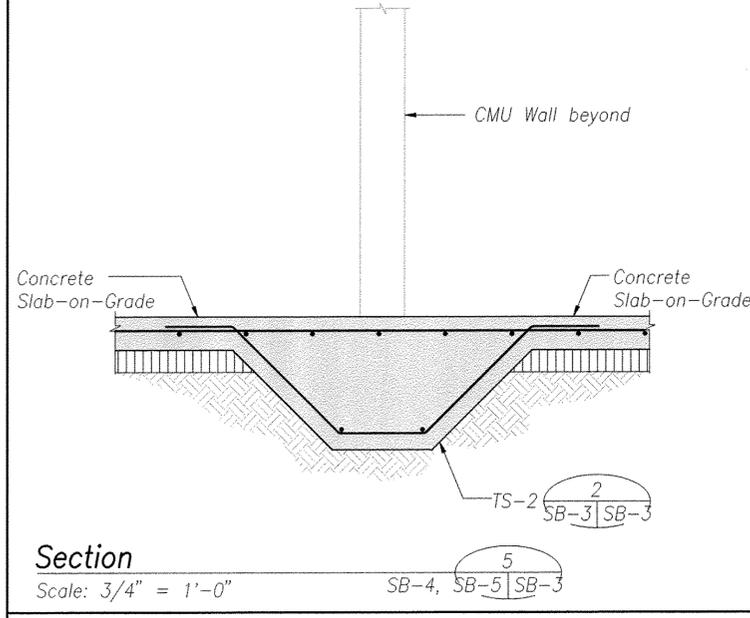
Section
Scale: 3/4" = 1'-0"
SB-3, SB-4, SB-5 | SB-3



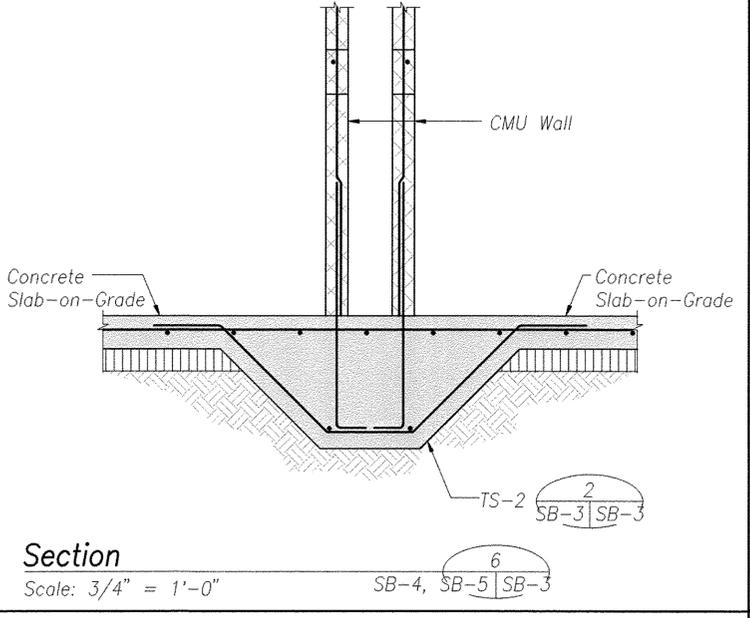
Section
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-3



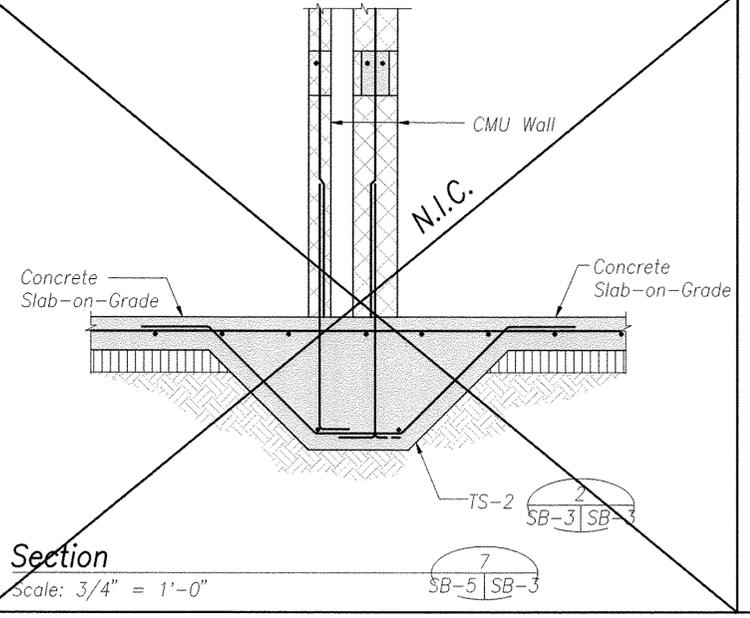
Section
Scale: 3/4" = 1'-0"
SB-4, SB-5, SB-6 | SB-3



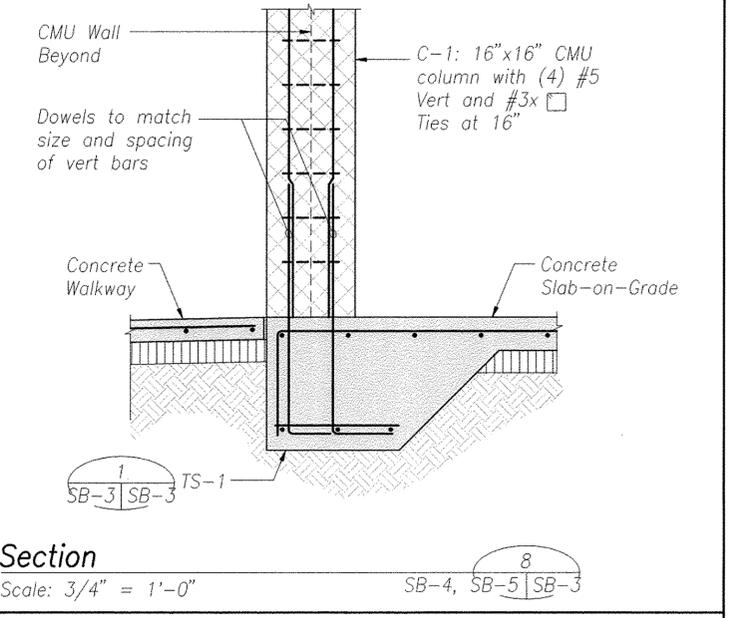
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Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-3



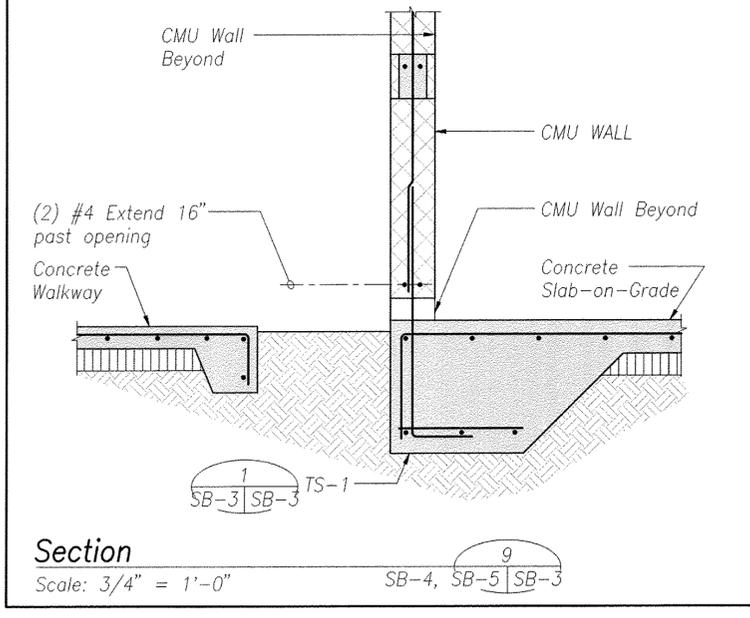
Section
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-3



Section
Scale: 3/4" = 1'-0"
SB-5 | SB-3



Section
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-3



Section
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-3



Section
Scale: 3/4" = 1'-0"
SB-5 | SB-3

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

JOYATHAN D. MURI
LICENSED PROFESSIONAL ENGINEER
No. 10979-S
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

CENTRAL MAUI REGIONAL SPORTS COMPLEX
PHASE 4
WAILUKU, MAUI, HAWAII

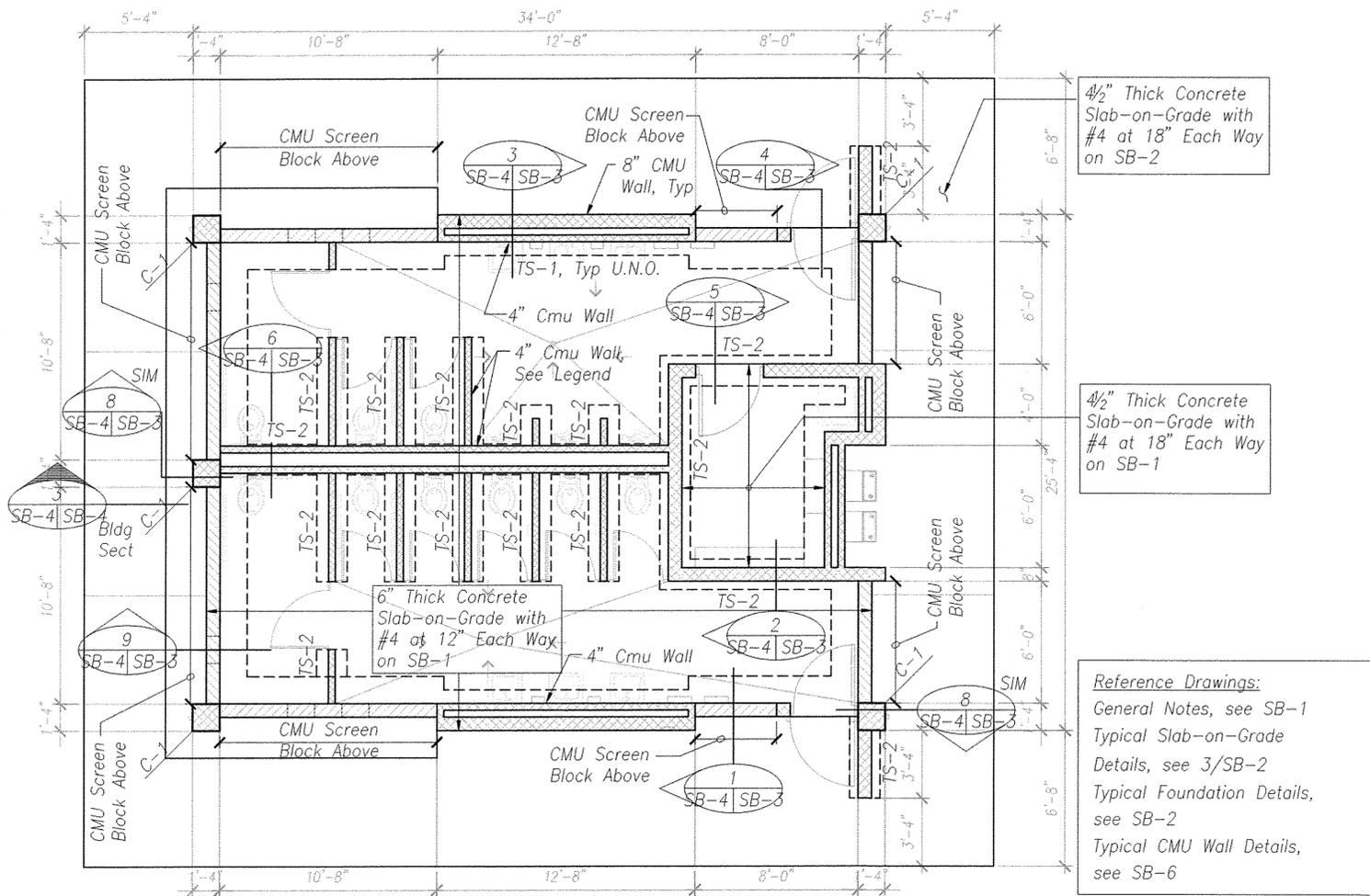
**FOOTING SCHEDULE,
FOUNDATION SECTIONS**

DESIGNED: JM	SUBMITTED: --
DRAWN: CADD	DATE: AUGUST 2016
CHECKED: JM	SCALE: AS SHOWN
APPROVED:	DRAWING NO. SB-3

R. M. TOWILL CORPORATION
CHIEF ENGINEER

AUG 8 2016

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4 1/2" Thick Concrete Slab-on-Grade with #4 at 18" Each Way on SB-2

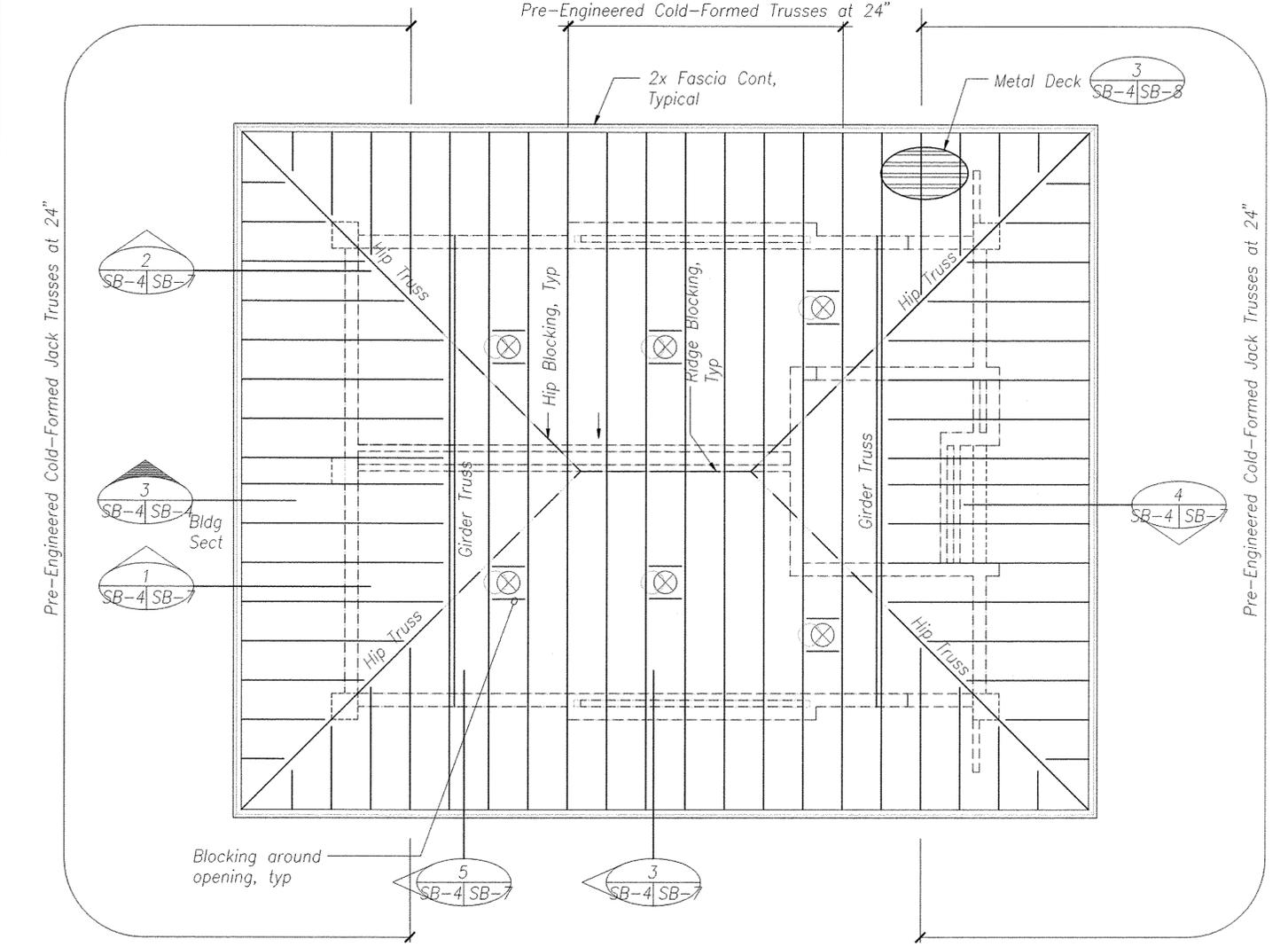
4 1/2" Thick Concrete Slab-on-Grade with #4 at 18" Each Way on SB-1

Reference Drawings:
 General Notes, see SB-1
 Typical Slab-on-Grade Details, see 3/SB-2
 Typical Foundation Details, see SB-2
 Typical CMU Wall Details, see SB-6

- Foundation Notes:**
- Reference elevation 0.00 = finish floor elevation 00.00'.
 - For dimensions not shown, see Architectural Drawings.
 - For waterproofing requirements and details, see Architectural Drawings.
- Slab on Grade Notes:**
- Thickness of Slab-on-Grade shown are minimum and shall be maintained at all sloped and depressed areas.
 - For floor elevations, slopes to drain and slab joint locations, see Architectural drawings.

- Legend**
- SB-1 Indicates Subgrade Type, see 3/SB-2
 - TS-1 Indicates Thickened Slab Type, see SB-3
 - C-1 Indicates Column Type, see SB-3
 - ▨ Indicates Change in Elevation
 - ▩ Indicates Full Height CMU Wall
 - ▧ Indicates Partial Height CMU Wall

Restroom Foundation Plan
 Scale: 1/4" = 1'-0"
 SB-4 | SB-4

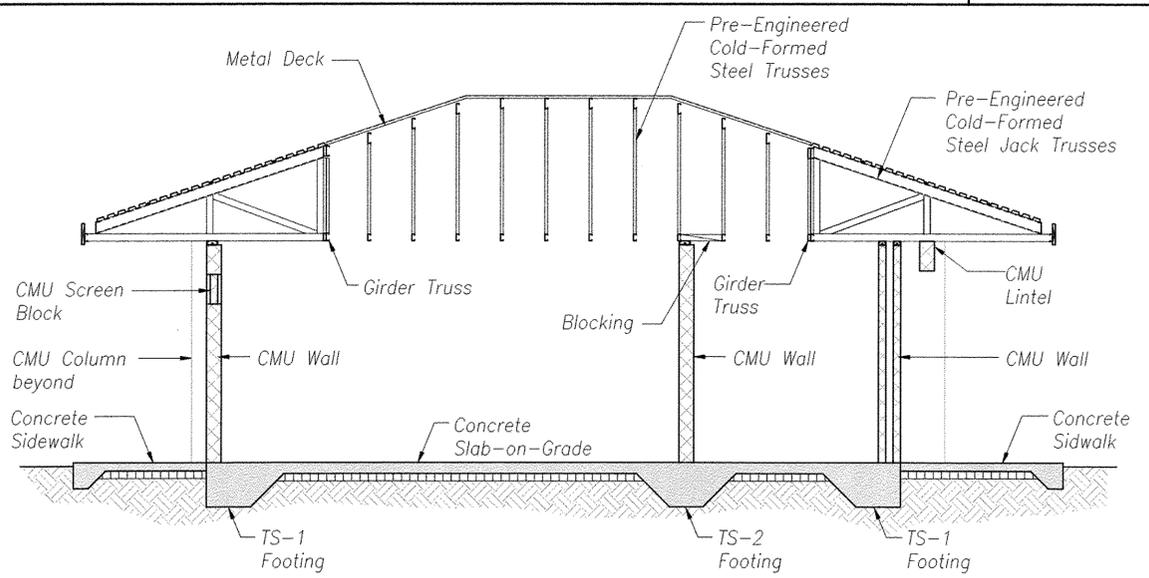


Restroom Roof Framing Plan
 Scale: 1/4" = 1'-0"
 SB-4 | SB-4

Reference Drawings:
 General Notes, see SB-1
 Truss Elevations, see SB-10

Notes:
 1. See Architectural Drawings for Location of Mechanical Openings.

Legend
 □ □ Indicates CMU Wall Below



Restroom Building Section
 Scale: 1/4" = 1'-0"
 SB-4 | SB-4

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

DESIGNED: JM
 DRAWN: CADD
 CHECKED: JM
 APPROVED: *[Signature]*
 CHIEF ENGINEER

STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION

CENTRAL MAUI REGIONAL SPORTS COMPLEX
 PHASE 4
 WAILUKU, MAUI, HAWAII

RESTROOM FOUNDATION AND ROOF FRAMING PLANS, BUILDING SECTION

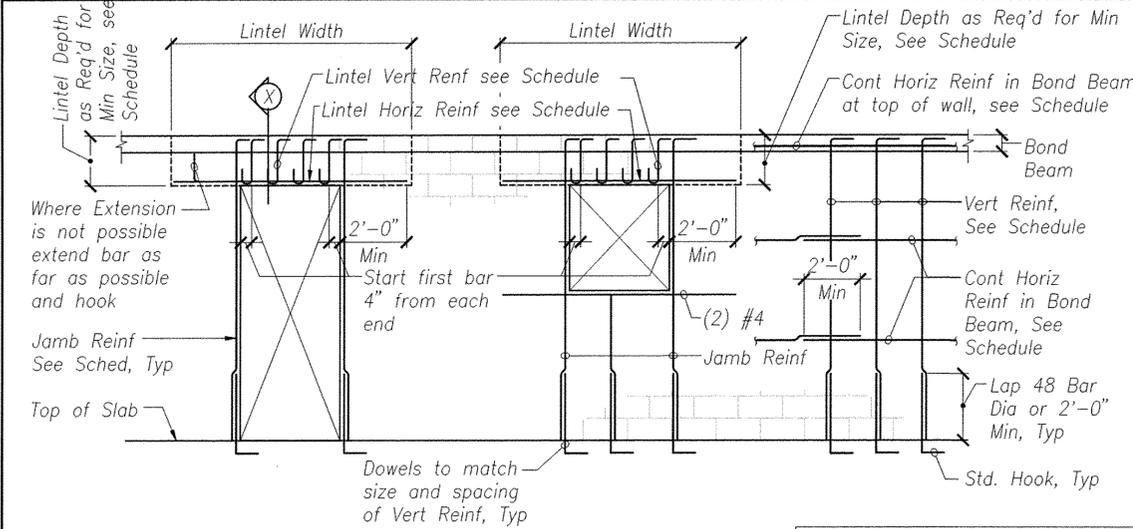
DESIGNED: JM
 DRAWN: CADD
 CHECKED: JM
 APPROVED: *[Signature]*
 CHIEF ENGINEER

EXPIRATION DATE OF THE LICENSE 4/30/2018
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

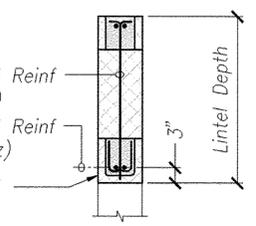
R.M. TOWILL CORPORATION
INCORPORATED IN CALIFORNIA UNDER CONTRACT NO. 10979-S

DATE: AUGUST 2016
 SCALE: AS SHOWN
 DRAWING NO. **SB-4**

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Wall Thickness (Inches)	Bar Size and Spacing		Remarks
	Horiz	Vert	
4	#3 at 48"	#3 at 24"	
8	(2) #4 at 48"	#5 at 24"	



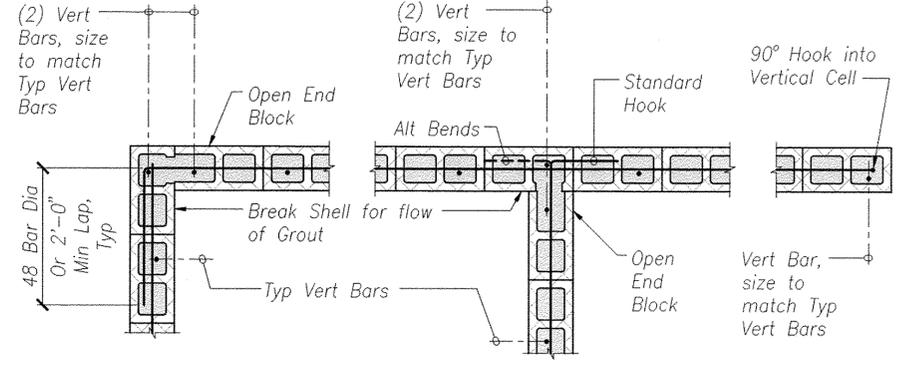
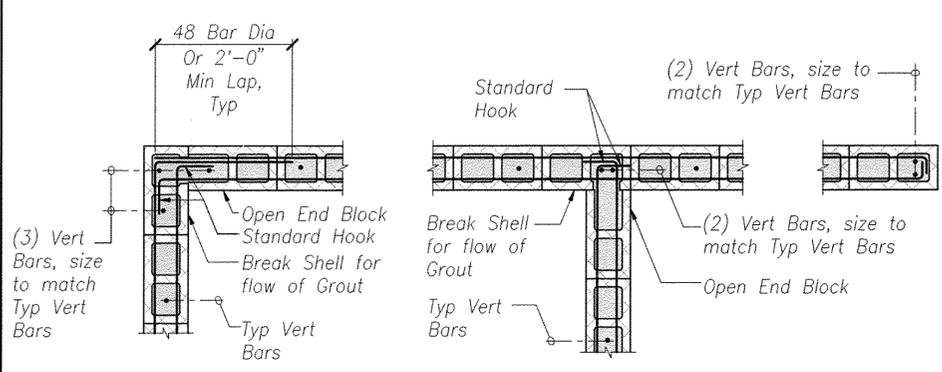
SECTION
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Opening Width	Lintel Depth (Minimum)	Reinforcing			Remarks
		Jamb	Lintel Horiz	Lintel Vert	
$W < 5'-0"$	1'-4"	(2) #4	(2) #4	#4 at 8"	
$5'-1" < w < 7'-0"$	1'-4"	(2) #5	(2) #5	#4 at 8"	
$7'-1" < w < 10'-0"$	1'-4"	(2) #6	(2) #6	#5 at 8"	

Typical Cmu Wall Elevation Detail

Not To Scale SB-6 SB-6

Note: All walls shall be solid grouted.



At Corner At Intersection At End

At Corner At Intersection At End

Double Mat

Single Mat

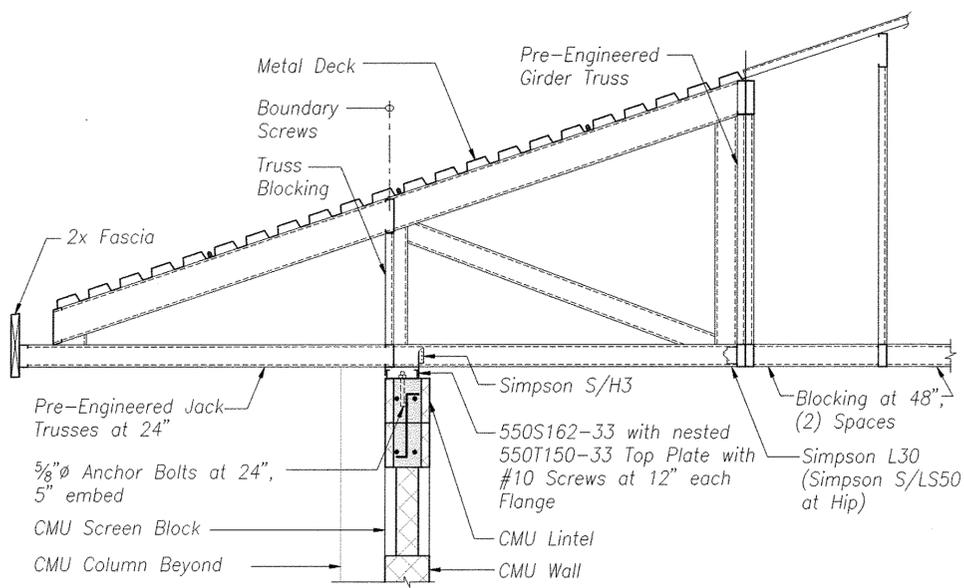
Cmu Wall Reinforcing At Bond Beam

Not To Scale SB-4 SB-6

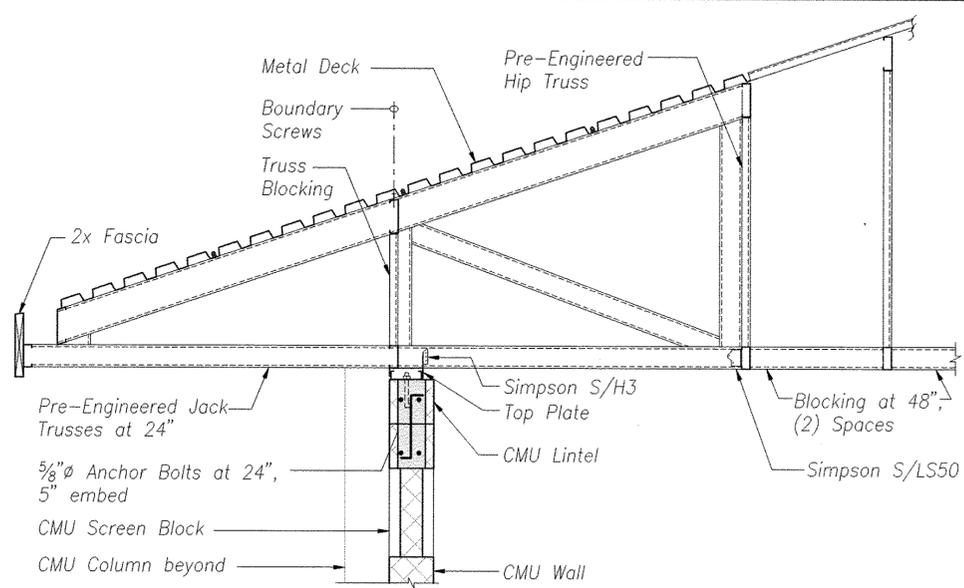
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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII TYPICAL CMU DETAILS					
DESIGNED: JM	SUBMITTED: --				
DRAWN: CADD	DATE: AUGUST 2016				
CHECKED: JM	SCALE: AS SHOWN				
APPROVED:		DATE: AUG - 8 2016		DRAWING NO. SB-6	
R. M. TOWILL CORPORATION CHIEF ENGINEER					

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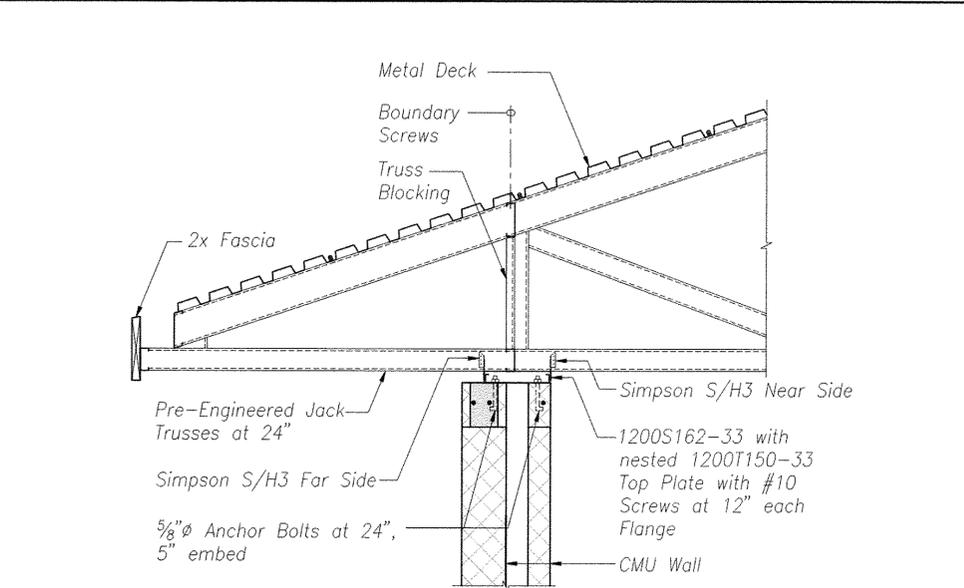
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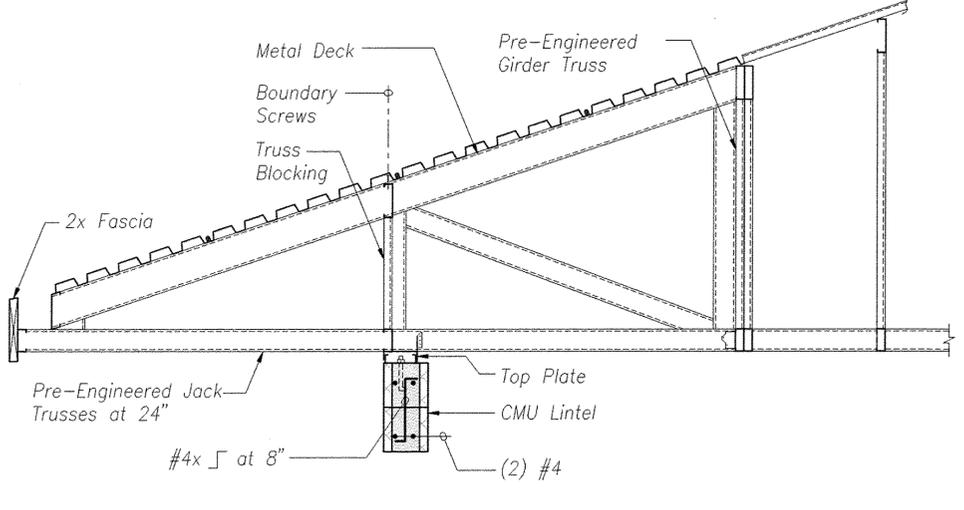
Section 1
Scale: 3/4" = 1'-0"
SB-4, SB-5, SB-7, SB-8 | SB-7



Section 2
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-7

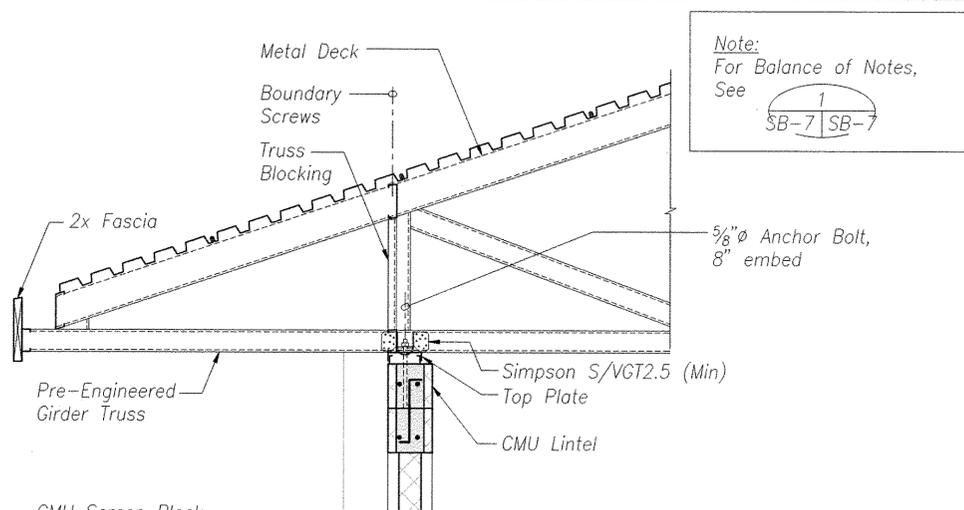


Section 3
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-7



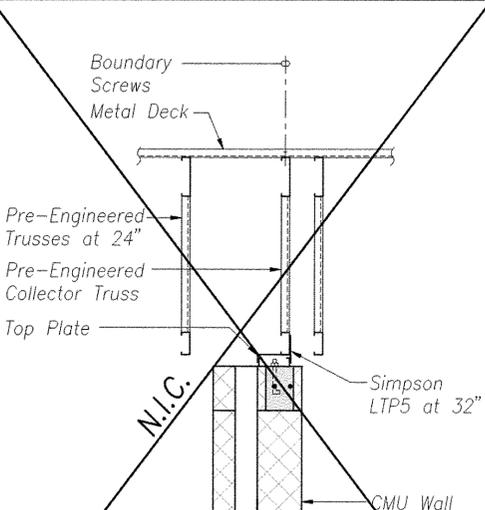
Section 4
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-7

Note:
For Balance of Notes,
See SB-7 | SB-7



Section 5
Scale: 3/4" = 1'-0"
SB-4, SB-5 | SB-7

Note:
For Balance of Notes,
See SB-7 | SB-7

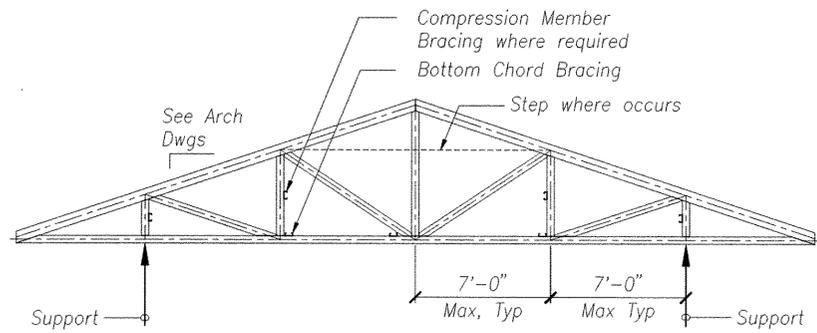


Section 6
Scale: 3/4" = 1'-0"
SB-5 | SB-7

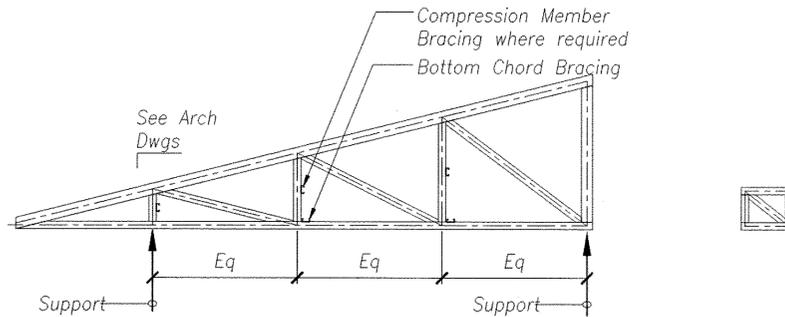
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII ROOF FRAMING SECTIONS					
DESIGNED:	JM	SUBMITTED:	---		
DRAWN:	CADD	DATE:	AUGUST 2016		
CHECKED:	JM	SCALE:	AS SHOWN		
APPROVED:			DATE:	AUG - 8 2016	
R. M. TOWILL CORPORATION		CHIEF ENGINEER	DRAWING NO. SB-7		

Cold-Formed Steel Roof Trusses Notes:

- A. Trusses and components shall be engineered in accordance with AISI "North American Specification for the Design of Cold-Formed Steel Structural Members", Latest Edition and AISI S214: "North American Standard for Cold-Formed Steel Framing - Truss Design", Latest Edition.
- B. Truss fabrication shall be performed by an experienced cold-formed steel truss fabricator with not less than three years satisfactory experience designing and fabricating cold-formed steel truss systems equal in material, design, and extent to the systems required for this project.
- C. Truss installation shall be performed by an experienced (three year minimum) installer approved by the steel truss system fabricator.
- D. Truss members 54, 68 or 97 mils thick shall meet the requirements of ASTM A1003 Grade ST50H. Truss members 33 or 43 mils thick shall meet the requirements of ASTM A1003 Grade ST33H. Provide galvanized protective coating in accordance with ASTM A924, minimum G60 coating.
- E. Self-drilling, self-tapping screws shall conform to SAE J 78 and have a Type II coating in accordance with ASTM B633. Screws shall be installed with a minimum edge distance and center-to-center spacing of 1/2 inch. Screws shall extend through steel member, flushing members together, with a minimum of three exposed threads.
- F. Prefabricated framing hardware shall be Simpson Strong-Tie galvanized or approved equal. Install in accordance with manufacturer's recommendations.
- G. Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of the structural engineer.
- H. Truss calculations and shop drawings shall be, stamped and signed by a Structural Engineer licensed to practice in the State of Hawaii and submitted for approval prior to fabrication. Shop drawings shall include at a minimum:
 1. Layout of trusses, configuration, camber, member sizes, and connection details
 2. Specifications
 3. Temporary and permanent bracing details and requirements
 4. Truss to truss connection details, splice details and bearing details
- I. See Architectural Drawings for slopes of top and bottom chords.
- J. Design shall be based on the following criteria:
 1. Roof dead load (not including self weight of trusses) = 11 psf
 2. Roof live load top chord = 20 psf (reducible)
 3. Bottom chord live load = 10 psf
 4. Wind loads in accordance with building code criteria noted on drawings
 5. Load combinations in accordance with Building Code.
 6. Top chord and bottom chord live load need not act concurrently.
 7. Vertical deflection under total load shall be limited to 1/240 of span or 1 1/4", whichever is less.
 8. Vertical deflection under live or wind load shall be limited to 1/360 of span or 3/4", whichever is less.
 9. Collector truss = 450 plf. (Unfactored) Loads along collector trusses are reversible. Loads along top chord shall be transferred to bottom chord through truss member connections.
- K. Truss member minimum sizes are as follows (Steel Stud Manufacturers Association designation):
 1. Top chord = 600S162
 2. Bottom chord = 400S162
 3. Web members = 400S162
- L. Special or proprietary cold formed roof truss systems which modify or alter typical details, support connections and architectural interface shall have modified details engineered and approved.

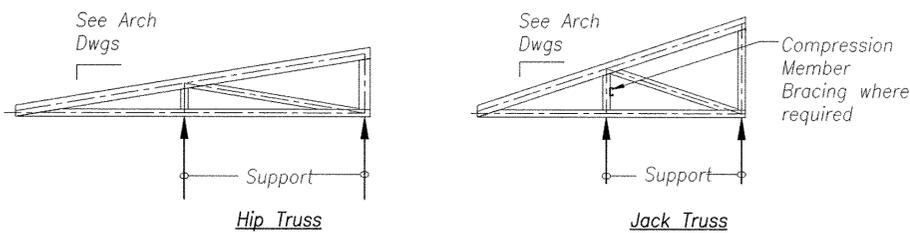


Typical Truss at Restroom and Concession



Typical Truss at Scorers Booth

Truss Blocking

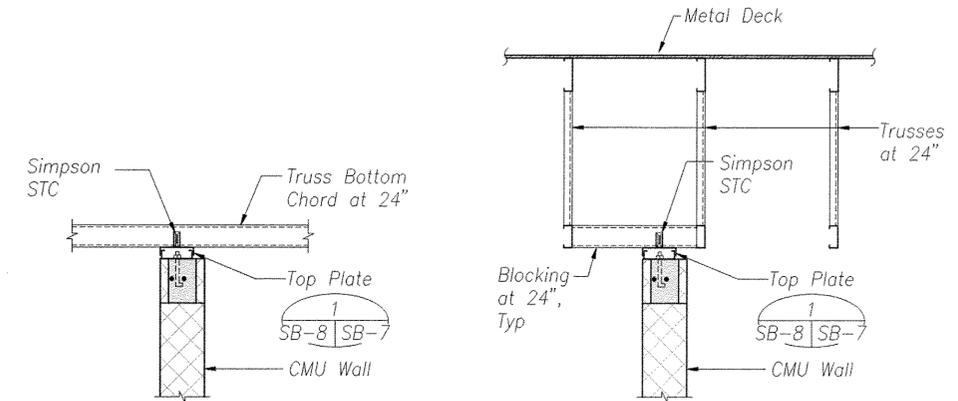
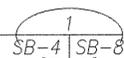


Hip Truss

Jack Truss

Truss Elevations and Notes

Not to Scale

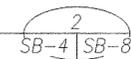


Wall Perpendicular to Trusses

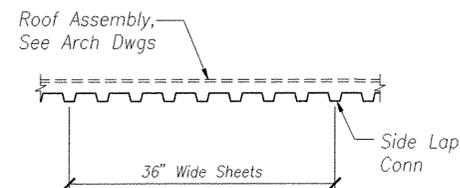
Wall Parallel to Trusses

Non-Bearing Wall Bracing Detail

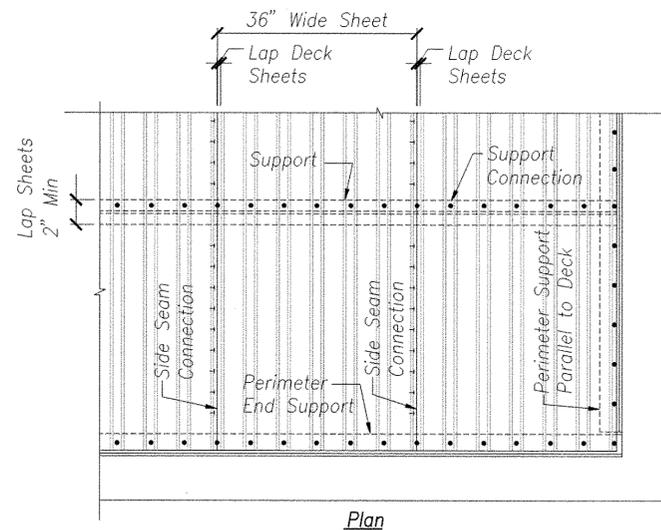
Not to Scale



Metal Deck Schedule									
Location	Type	Minimum Section Properties			Concrete Topping	Deck Fastening			Remarks
		I (in ⁴)	+S (in ³)	-S (in ³)		At Support per 36" sheet width	Side Seam Connector	At Support or member parallel to Deck	
Roof	1/2" x 22 Gage	0.175	0.187	0.198	No	(4) #12 Screws	#12 Screws At 12"	#12 Screws At 12"	



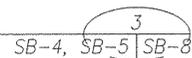
Section



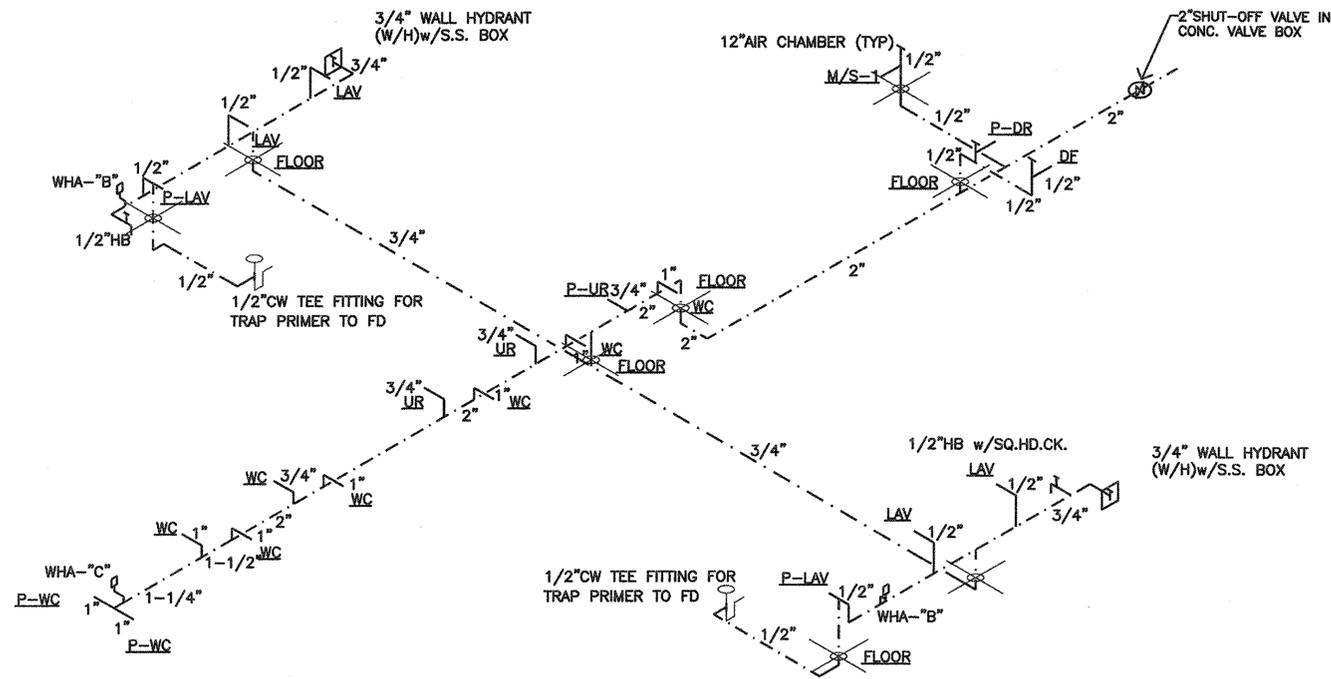
Plan

Metal Deck Schedule and Details

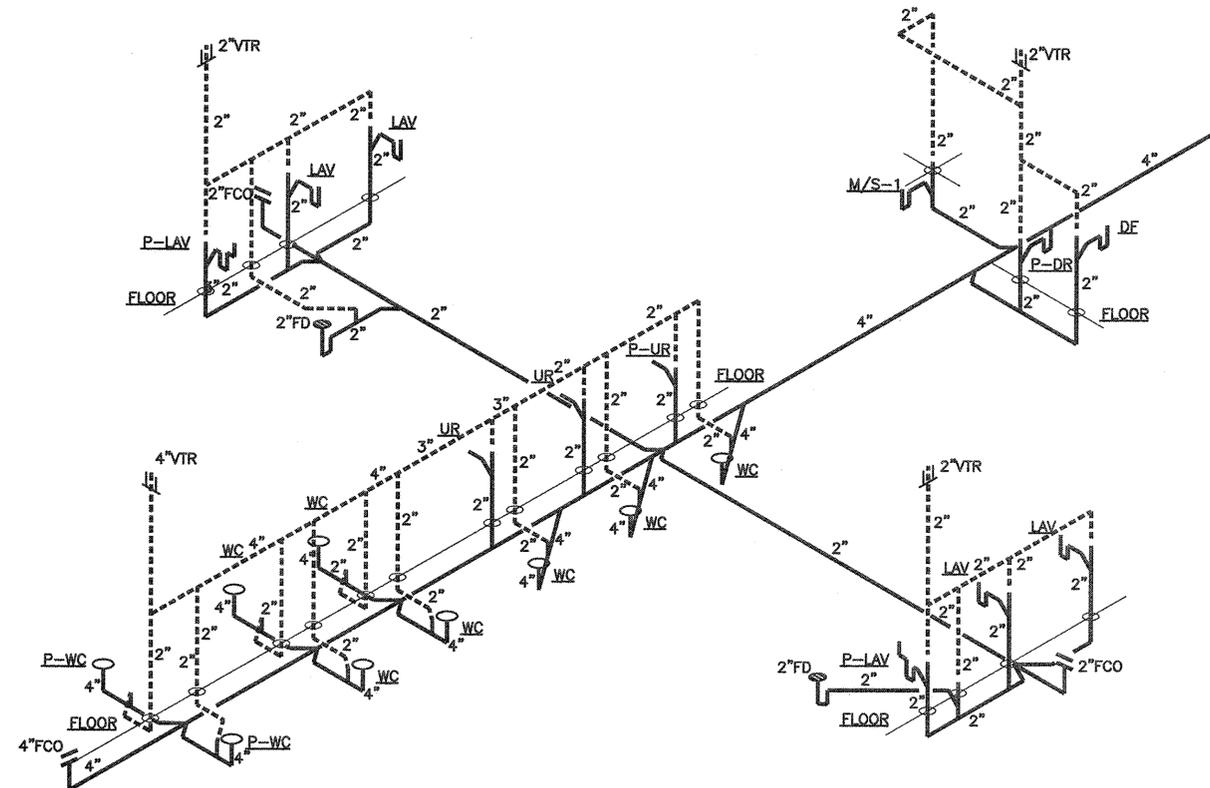
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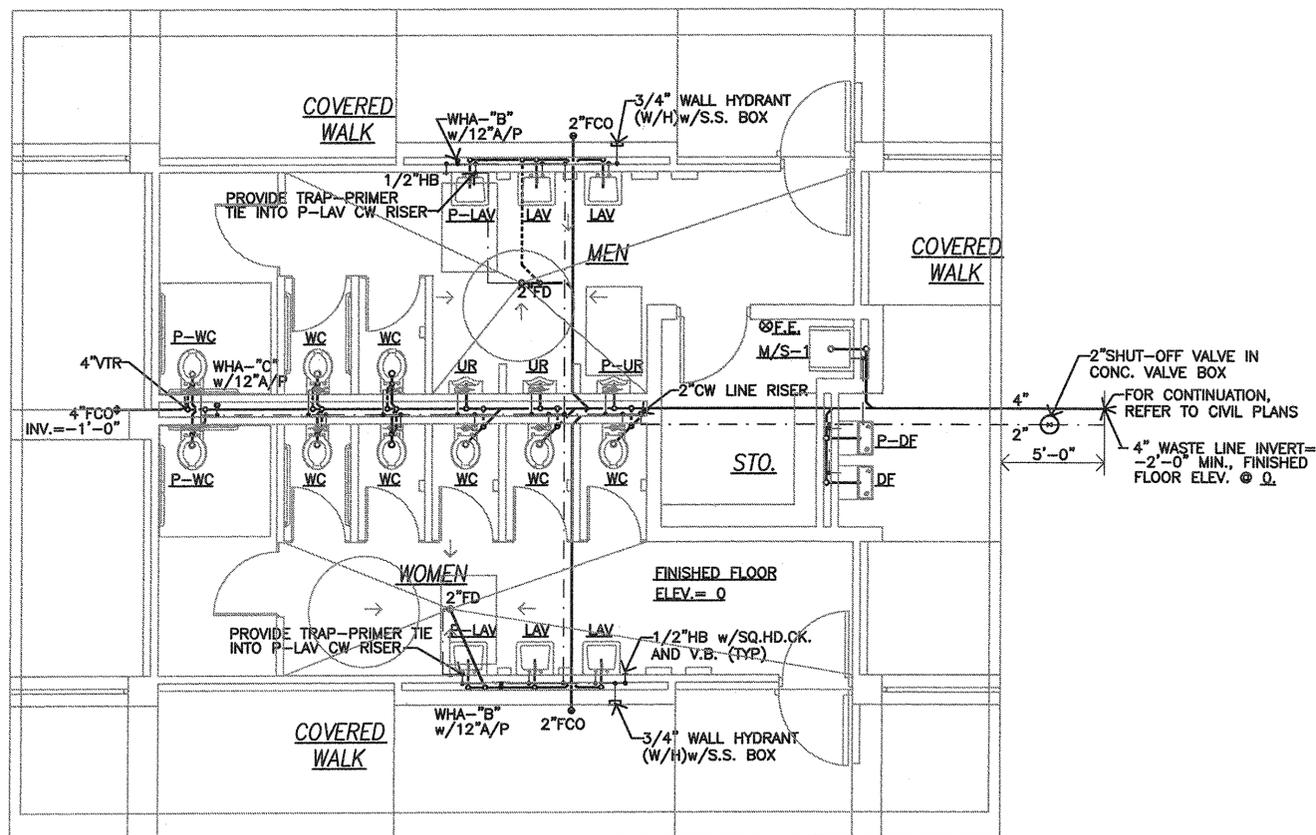
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII ROOF FRAMING SECTIONS AND TRUSS ELEVATIONS					
		DESIGNED: JM	SUBMITTED: --		
EXPIRATION DATE OF THE LICENSE 4/30/2018 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION		DRAWN: CADD	DATE: AUGUST 2016		
APPROVED:		CHECKED: JM	SCALE: AS SHOWN		
R.M. TOWILL CORPORATION CHIEF ENGINEER		AUG - 8 2016		DRAWING NO. SB-8	



COLD WATER PIPING DIAGRAM
NOT TO SCALE



SANITARY WASTE AND VENT PIPING DIAGRAM
NOT TO SCALE



TYPICAL RESTROOM FLOOR PLAN - PLUMBING
SCALE: 1/4"=1'-0"

MECHANICAL LEGEND

---	WASTE LINE
---	VENT LINE
---	COLD WATER LINE
---	HOT WATER LINE
(POC)	POINT OF CONNECTION
SK	SINK
W/DISP.	WITH DISPOSER
WC	WATER CLOSET
LAV	LAVATORY
UR	URINAL
P-	ACCESSIBLE FIXTURE
M/S	MOP SINK
VTR	VENT THRU ROOF
WHA	WATER HAMMER ARRESTER
(E) EXIST'G.	EXISTING
CONC.	CONCRETE
TYP.	TYPICAL
FE	FIRE EXTINGUISHER
FCO	FLOOR CLEANOUT
w/	WITH
SQ. A/P	SQUARE ACCESS/PANEL
SQ.HD.CK.	SQUARE HEAD COCK
V.B.	VACUUM BREAKER
DF	DRINKING FOUNTAIN
S.S.	STAINLESS STEEL
HB	HOSE BIBB
EWH	ELECTRIC WATER HEATER
HD.SK.	HAND SINK
3-COMPT. SK.	3-COMPARTMENT SINK

GENERAL CONDITIONS:

- CONFORM TO ALL REQUIREMENTS OF THE BUILDING, PLUMBING, AND ELECTRICAL CODES OF THE MAUI COUNTY, STATE OF HAWAII HEALTH REGULATIONS, FIRE DEPARTMENT REGULATIONS AND OTHER APPLICABLE REGULATIONS. ALL ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- INSTALLATION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR ONE YEAR FROM FINAL DATE OF ACCEPTANCE OF THE PROJECT AS A WHOLE.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BID AND CONSTRUCTION.
- COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND DELAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND APPLICATIONS INCLUDING PAYMENT.
- PROVIDE ADDITIONAL MATERIALS AND LABOR FOR A COMPLETE OPERABLE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE ACCESS PANELS FOR ALL ITEMS UNDER THIS SECTION REQUIRING SERVICING, INSPECTION, MAINTENANCE AND ADJUSTMENT.
- PREPARE SIX (6) SETS OF SHOP DRAWINGS, EQUIPMENT CATALOG CUTS, SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WORK. NO REPRODUCTIONS OF ANY KIND OF THE CONTRACT DOCUMENTS SHALL BE ACCEPTABLE AS SHOP DRAWINGS. PROVIDE ONE SET OF REPRODUCIBLE AS-BUILT DRAWINGS SHOWING THE ACTUAL INSTALLED CONDITIONS AND SUBMIT TO THE OWNER UPON COMPLETION OF WORK.
- CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS FOR INSTALLATION OF EQUIPMENTS PRIOR TO ANY WORK DONE. ANY OBSTRUCTIONS FOR EQUIPMENT INSTALLATION SHALL BE POINTED OUT PRIOR TO BIDDING OF PROJECT.
- CAULK ALL WALL PENETRATIONS TO THE OUTSIDE WATERTIGHT, NON-SHRINK TYPE.
- USE NON-LEAD, NON-CORROSIVE SOLDER/FLUX.
- CONTRACTOR TO CONFORM TO ALL EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE DIELECTRIC UNION OR SEPARATION BETWEEN DISSIMILAR METALS.
- CONTRACTOR SHALL VERIFY ALL EXISTING LINE SIZES, INVERTS AND CONNECTION POINT PRIOR TO BID AND CONSTRUCTION.

REVISION NO.	SYL.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WALUKU, MAUI, HAWAII PLUMBING PLANS, DIAGRAMS, NOTES, LEGEND					
			DESIGNED: ESN SUBMITTED: --- DRAWN: ESN DATE: AUGUST 2016 CHECKED: RHM SCALE: AS SHOWN		
APPROVED: 			DRAWING NO. P-1 DATE AUG - 8 2016		

MECHANICAL EQUIPMENT SCHEDULE

DRINKING FOUNTAIN (P-DF/DE): ELKAY MODEL NO. EHM217C OR APPROVED EQUAL, FIXTURE TO COMPLY WITH THE REQUIREMENTS OF THE (AMERICAN WITH DISABILITIES ACT). PROVIDE WALL SURFACE MOUNTING PLATE WITH FLOOR SUPPORT LEGS WITH PIPE CHASE WALL. PROVIDE MODEL NO. 97258C APRON FOR THE HIGHER DRINKING FOUNTAIN AS REQUIRED.

ELECTRIC WATER HEATER (EWH): STATE MOD. NO. CPE 52 20RTA OR EQUAL, 50 GALLONS CAPACITY, 4.5 KW, 208V/1PH/60HZ, STANDARD HEATING ELEMENT UPPER/LOWER AT 4.5 KW NONE SIMULTANEOUS.

FIRE EXTINGUISHER (F.E.): 10 LB. DRY CHEMICAL FIRE EXTINGUISHER, U/L RATED 4A:60B:C. POTTER ROEMER INC. POTTER ROEMER FIG. NO. 3010 OR EQUAL. PROVIDE WALL MOUNTING BRACKET.

MAUI DEPT. OF WATER SUPPLY DOMESTIC FLOW REQUIREMENT:

CENTRAL MAUI REGIONAL PARK WAILUKU, MAUI, HAWAII

TMK: 000000000000 PROJECT NO. 0000000000

PROVIDE: MINIMUM 2" WATER METER SIZE

CPM CALCULATED USING 1997 UPC AND FUNDAMENTALS OF PLUMBING DESIGN, TABLE 3-6. EXISTING IRRIGATION SYSTEM ARE ON SEPARATE WATER METER ON SITE.

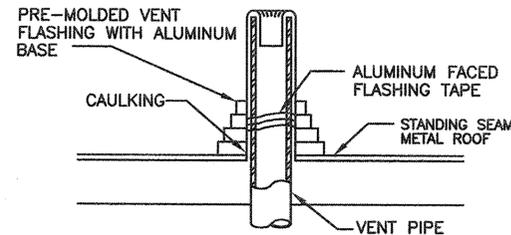
	FU	GPM	GPD
A. PROPOSED DOMESTIC (PUBLIC USE)	204	92	40,000
B. EXISTING IRRIGATION (OFF-PEAK HRS)	0	0	0
C. PROPOSED TOTAL	204	92	40,000
D. DOMESTIC TO BE REMOVED/DEMO	0	0	0
E. NET TOTAL (C-D; -CREDIT/+CHARGE)	204	92	40,000
F. EXISTING TO REMAIN	299.2	110	70,000
G. GRAND TOTAL (C+F; ON METER)	503.2	140	110,000

FIXTURE UNIT INFORMATION (FIXTURES): RESTROOM BLDG.

FIXTURE TYPE	QTY	LOW FLOW F.U.	TOTAL F.U.
LAVATORY- (LAV) (PU)	6	1.2	7.2
WATER CLOSET- (WC) (F.V.) (PU)	9	5.6	50.4
URINAL- (UR) (PU)	3	2.8	8.4
DRINKING FOUNTAIN- (D.F.) (PU)	2	2.0	4.0
MOP SINK- (M/S) (PU)	1	3.2	3.2
WALL HYDRANT- (W/H) (PU)	2	5.0	10.0
HOSEBIBB- (HB) (PU)	2	5.0	10.0
TRAP PRIMER	2	1.0	2.0
TOTAL	-	-	95.2

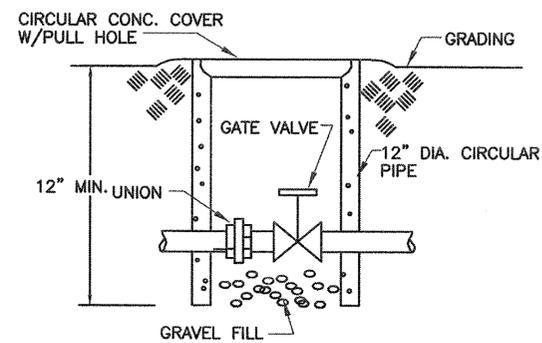
FIXTURE UNIT INFORMATION (FIXTURES): CONCESSION/RESTROOM BLDG.

FIXTURE TYPE	QTY	LOW FLOW F.U.	TOTAL F.U.
LAVATORY- (LAV) (PU)	6	1.2	7.2
WATER CLOSET- (WC) (F.V.) (PU)	9	5.6	50.4
URINAL- (UR) (PU)	3	2.8	8.4
DRINKING FOUNTAIN- (D.F.) (PU)	2	2.0	4.0
1-COMPT. SINK- (1-COMPT.SK) (PU)	1	3.2	3.2
HAND SINK- (HD.SK.) (PU)	1	1.2	1.2
FLOOR SINK- (FLR.SK.) (PU)	2	3.2	6.4
WALL HYDRANT- (W/H) (PU)	2	5.0	10.0
HOSEBIBB- (HB) (PU)	3	5.0	15.0
TRAP PRIMER	3	1.0	3.0
TOTAL	-	-	108.8



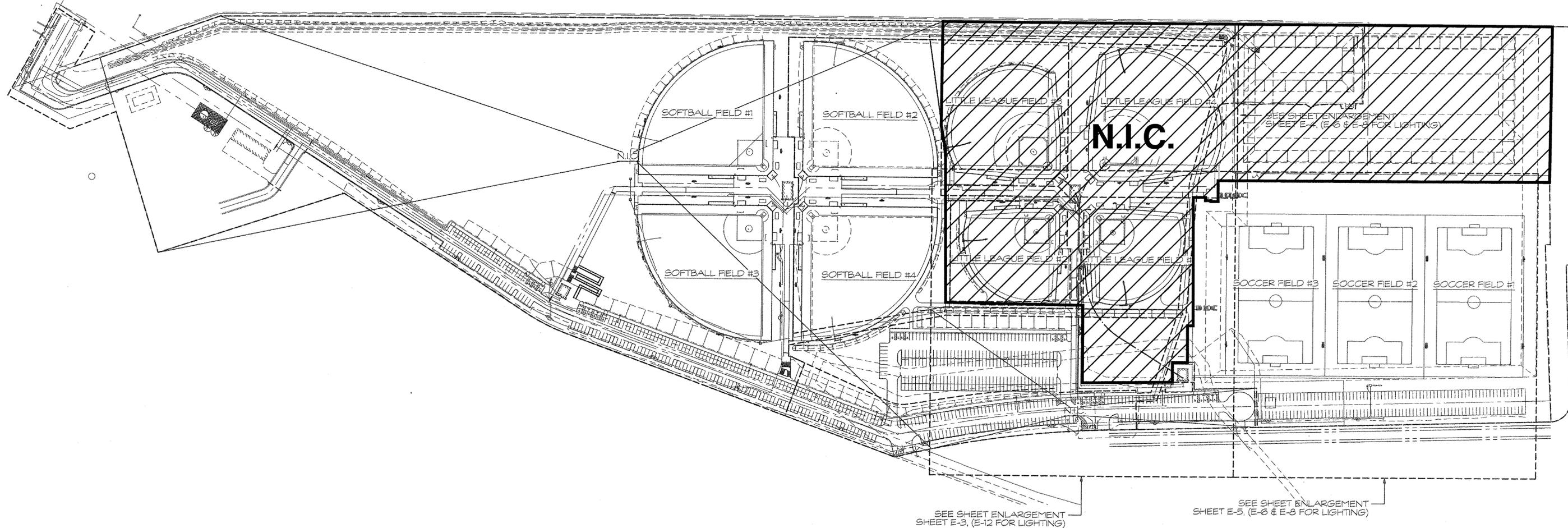
NOTES: 1. REFER TO ARCHITECTURAL PLAN FOR ROOF DETAIL.

VENT THRU ROOF DETAIL
NOT TO SCALE



VALVE BOX DETAIL
NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII EQUIPMENT SCHEDULE, DETAILS, WATER CALCULATIONS					
DESIGNED: ESN DRAWN: ESN CHECKED: RHM		SUBMITTED: --- DATE: AUGUST 2016 SCALE: AS SHOWN			
APPROVED: <i>[Signature]</i> R. M. TOWILL CORPORATION CHIEF ENGINEER		AUG - 8 2016 DATE			
					DRAWING NO. P-3



ELECTRICAL SITE PLAN

SCALE: 1" = 120'-0"

COUNTY OF MAUI
 MAUI COUNTY CODE, CHAPTER 16.16A ENERGY CODE

TO THE BEST OF MY KNOWLEDGE, THIS PROJECTS DESIGN SUBSTANTIALLY CONFORMS TO THE ENERGY CODE FOR:

BUILDING COMPONENT SYSTEMS
 ELECTRICAL COMPONENT SYSTEMS
 MECHANICAL COMPONENT SYSTEMS

SIGNATURE: [Signature] DATE: 11-06-15
 NAME: DON H. SUZUKI
 TITLE: PRINCIPAL
 LICENSE NO.: 9006-E

MAUI COUNTY CODE CHAPTER 20.35
 OUTDOOR LIGHTING

THE ELECTRICAL OUTDOOR LIGHTING SYSTEM AND EQUIPMENT HAVE BEEN REVIEWED BY ME AND TO THE BEST OF MY KNOWLEDGE, THIS DESIGN SUBSTANTIALLY CONFORMS TO THE REQUIREMENTS SPECIFIED IN MAUI COUNTY CODE CHAPTER 20.35 OUTDOOR LIGHTING.

SIGNATURE: [Signature]
 TITLE: PRINCIPAL
 PRINTED NAME: DON H. SUZUKI
 STATE OF HAWAII PROFESSIONAL ENGINEER LICENSE NUMBER: 9006-E

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE: [Signature] 4/30/16
 EXP. DATE

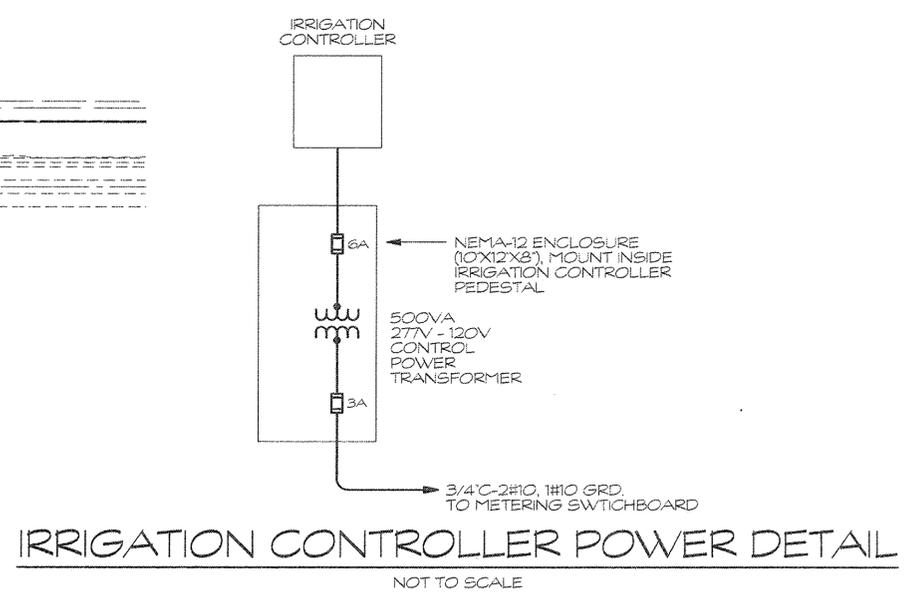
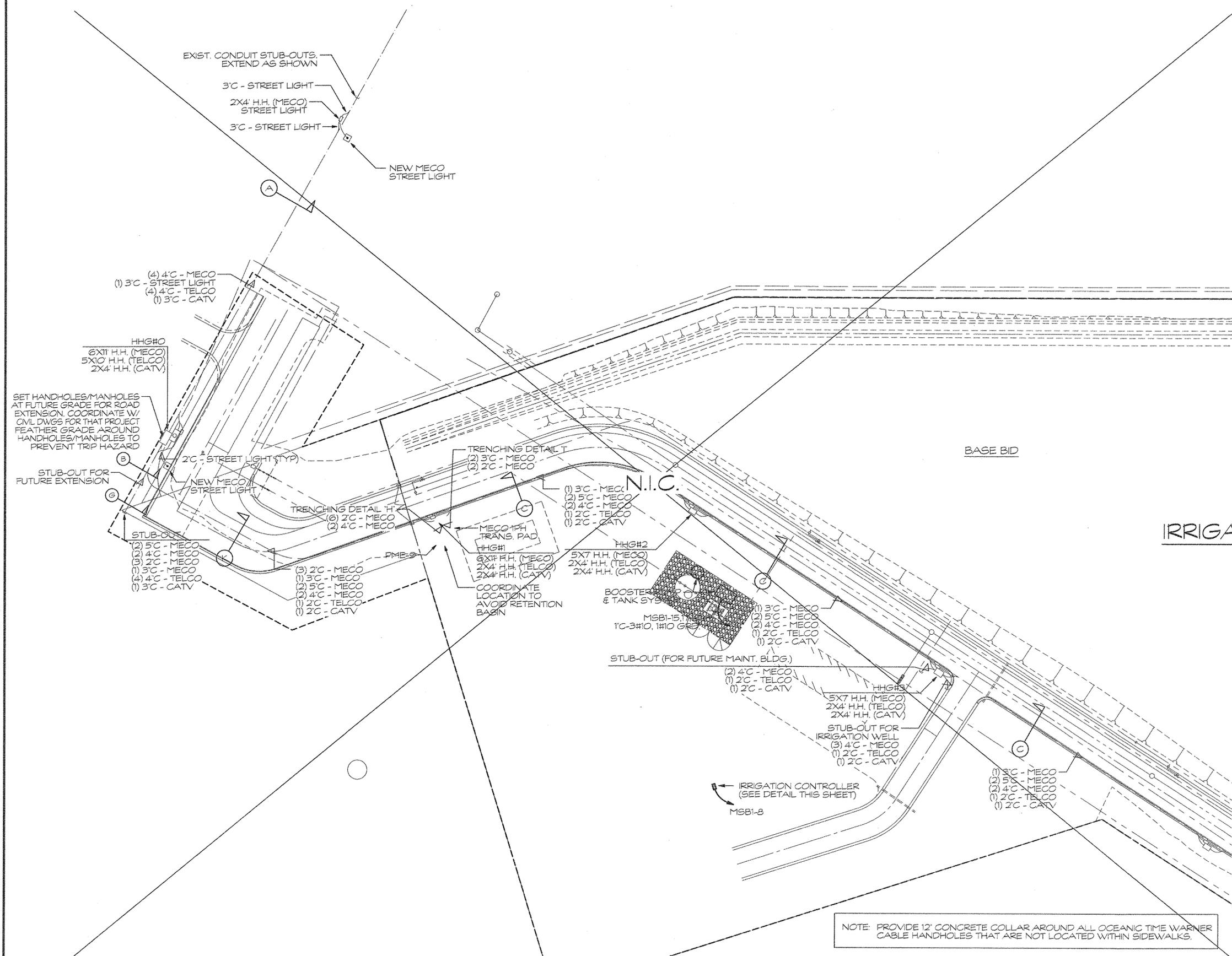
STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION

**CENTRAL MAUI REGIONAL SPORTS COMPLEX
 PHASE 4**
 WAILUKU, MAUI, HAWAII

ELECTRICAL SITE PLAN, NOTES, & DETAILS

DESIGNED: D.S.	SUBMITTED: <u>[Signature]</u>
DRAWN: K.N./E.S.	DATE: AUGUST 2016
CHECKED: D.S.	SCALE: AS NOTED

APPROVED: [Signature]
 CHIEF ENGINEER



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

NOTE: PROVIDE 12" CONCRETE COLLAR AROUND ALL OCEANIC TIME WARNER CABLE HANDHOLES THAT ARE NOT LOCATED WITHIN SIDEWALKS.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

[Signature]
SIGNATURE

4/30/18
EXP. DATE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

**CENTRAL MAUI REGIONAL SPORTS COMPLEX
PHASE 4**
WAILUKU, MAUI, HAWAII

PARTIAL ELECTRICAL SITE PLAN

DESIGNED: D.S.

DRAWN: K.N./E.S.

CHECKED: D.S.

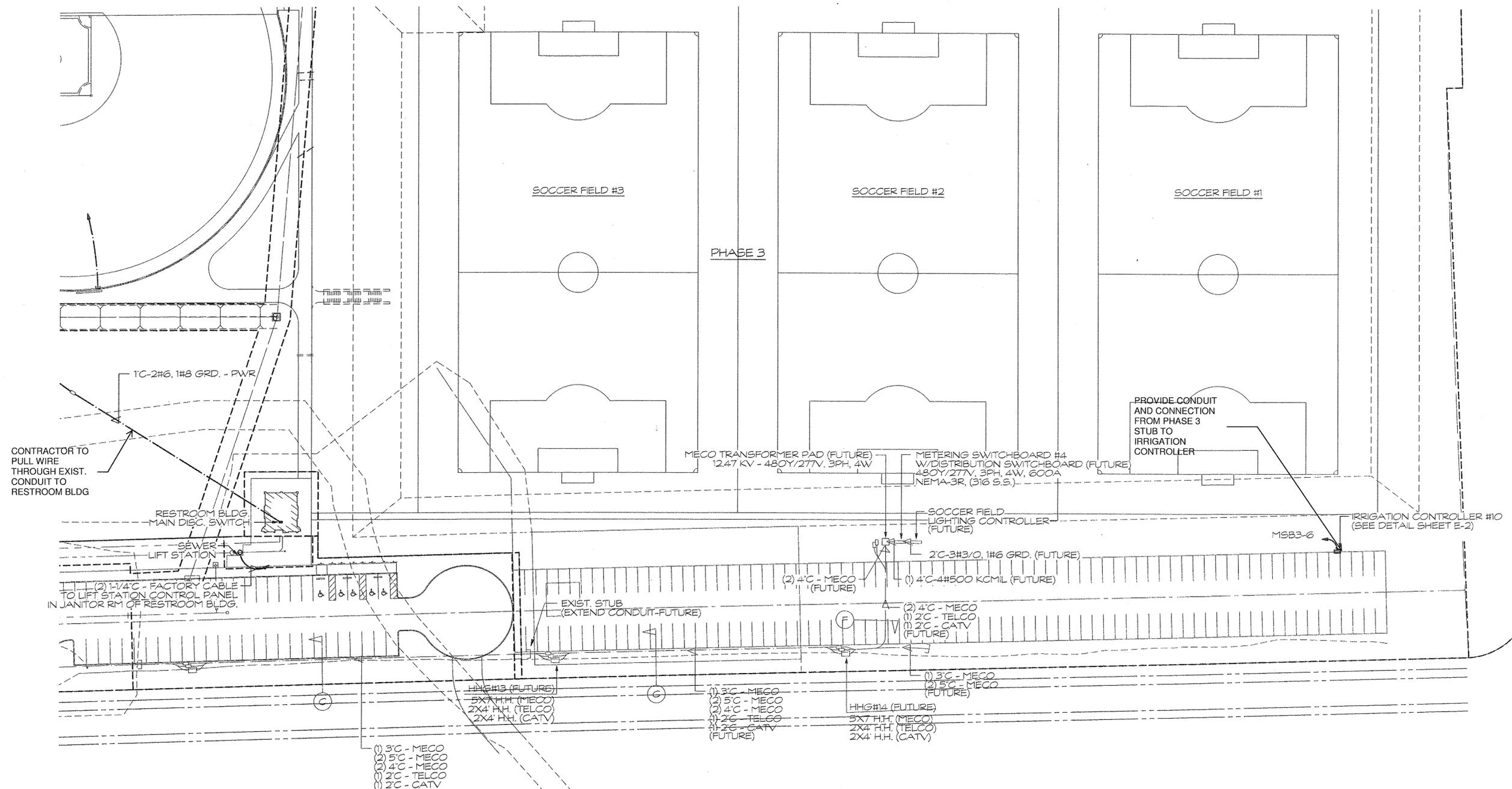
APPROVED: *[Signature]*
R. M. TOWILL CORPORATION
CHIEF ENGINEER

SUBMITTED: ---

DATE: AUGUST 2016

SCALE: AS NOTED

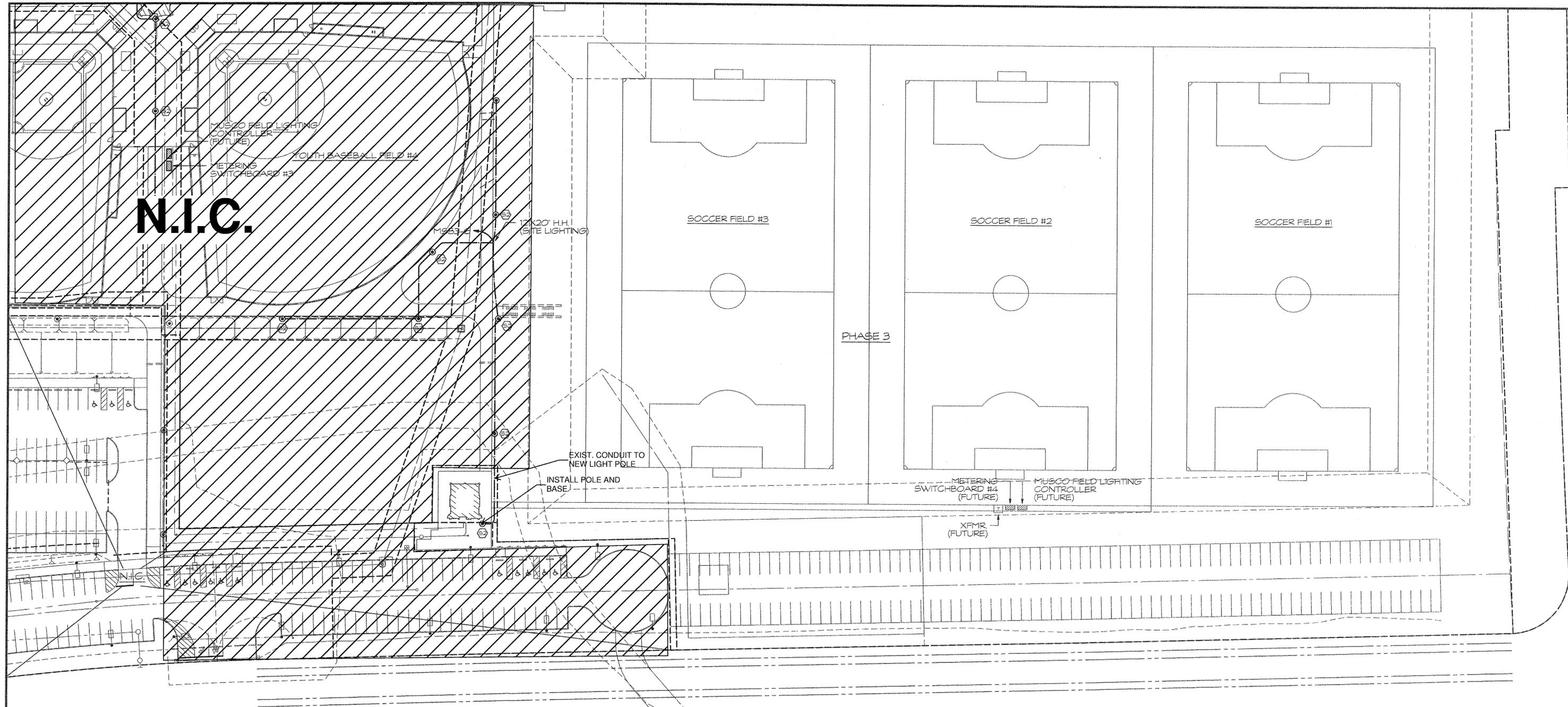
DRAWING NO.
E-2



PARTIAL ELECTRICAL SITE PLAN
SCALE: 1"=40'-0"

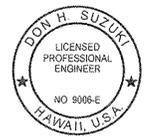
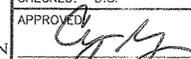
REVISION NO.	SYMBOL	DESCRIPTION	SHT./OF	DATE	APPROVED

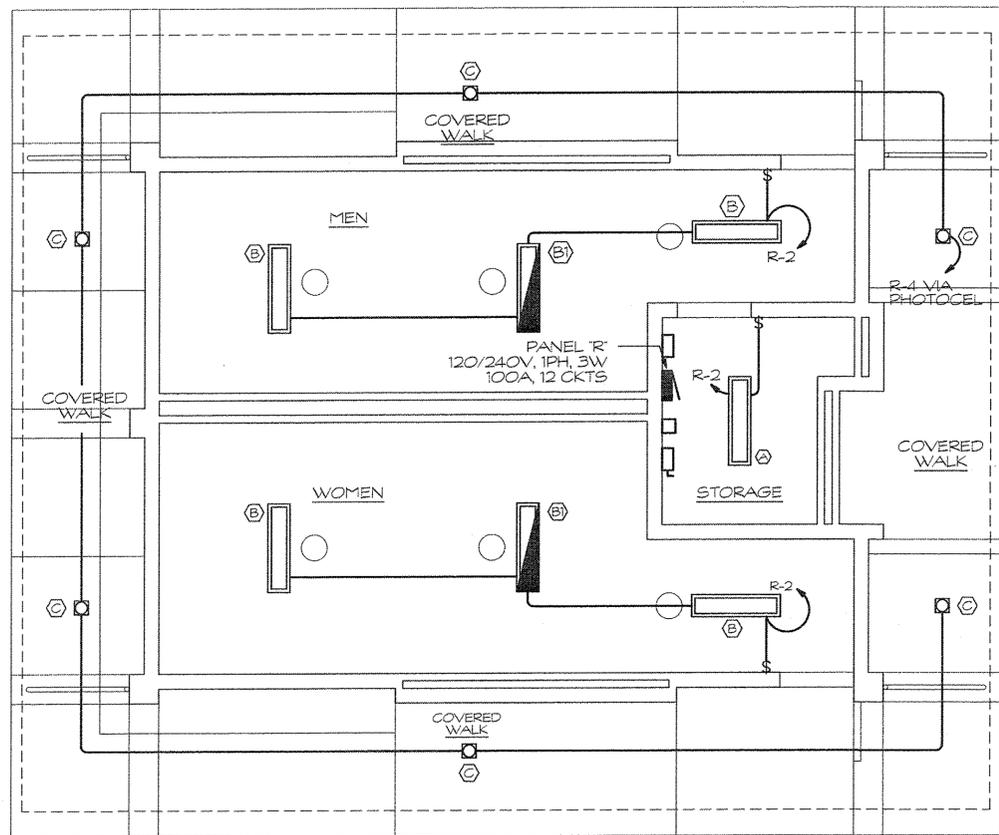
<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.</p> <p><i>[Signature]</i> 4/30/18 EXP. DATE</p> <p>R. M. TOWILL CORPORATION 1000 W. KALANANAKU AVE., SUITE 200, HONOLULU, HAWAII 96813 808 542 1122 FAX 808 542 1123</p>	STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII PARTIAL ELECTRICAL SITE PLAN	
	DESIGNED: D.S.	SUBMITTED: --- <i>[Signature]</i>
	DRAWN: K.N./E.S.	DATE: AUGUST 2016
	CHECKED: D.S.	SCALE: AS NOTED
APPROVED: <i>[Signature]</i>	DRAWING NO. E-5	
CHIEF ENGINEER	AUG - 8 2016 DATE	



PARTIAL ELECTRICAL SITE LIGHTING PLAN

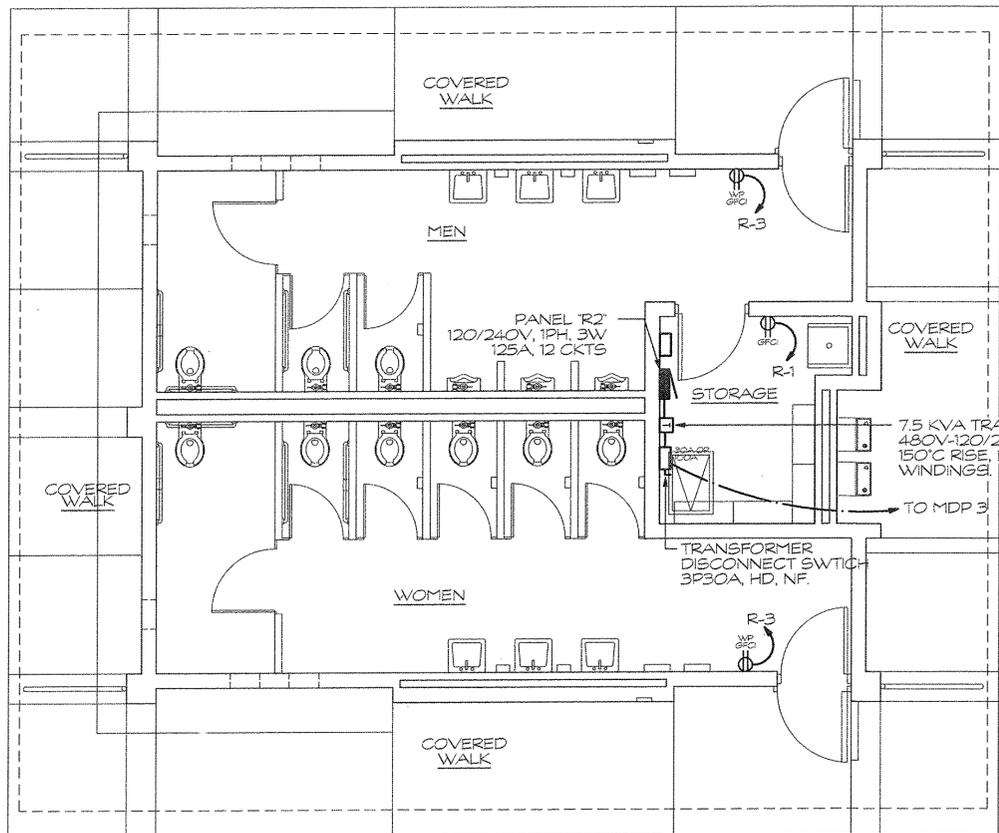
SCALE: 1" = 40'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII PARTIAL ELECTRICAL SITE LIGHTING PLAN					
 DON H. SUZUKI LICENSED PROFESSIONAL ENGINEER NO 9096-E HAWAII, U.S.A.		THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.			
 SIGNATURE		4/20/18 EXP. DATE		DESIGNED: D.S. SUBMITTED: ---	
DRAWN: K.N./E.S.		DATE: AUGUST 2016		CHECKED: D.S. SCALE: AS NOTED	
APPROVED:  CHIEF ENGINEER		AUG - 8 2016 DATE		DRAWING NO. E-7	



ELECTRICAL LIGHTING PLAN

SCALE: 1/4" = 1'-0"



ELECTRICAL POWER PLAN

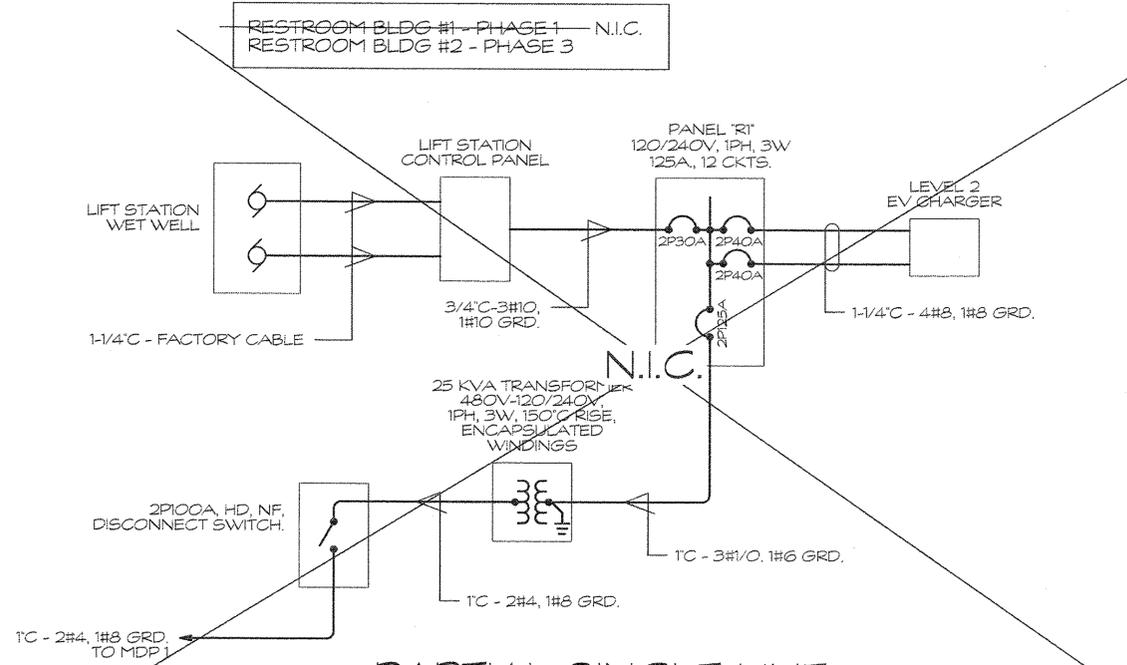
SCALE: 1/4" = 1'-0"

PANEL SCHEDULE: PANEL "R1"
 Voltage: 120/240V Phase: 1 Wire: 3 Bus Amps: 125A W/2P125A MAIN BRKR No. Ckts: 12
 Mounting: SURFACE NEMA Config: 1 Breaker Type: Plug In - 10,000 AIC Minimum

Ckt	Description	Ph A	Ph B	Brkr	Wire	Ckt	Description	Ph A	Ph B	Brkr	Wire
1	R-STORAGE	1.0		1P20	12	1	L-MENS, WOMENS, STORAGE	1.0		1P20	12
3	R-MEN & WOMEN RM.	1.0		1P20	12	4	L-EXTERIOR	1.0		1P20	12
5	MUSCO CONTROLLER	0.5			12	6	EV CHARGER	3.6		2P40	8
7	CELLULAR EQUIP	0.5			12	8					
9	EV CHARGER	3.6			12	10	LIFT STATION	1.0		2P30	10
11		3.6			2P40	8					

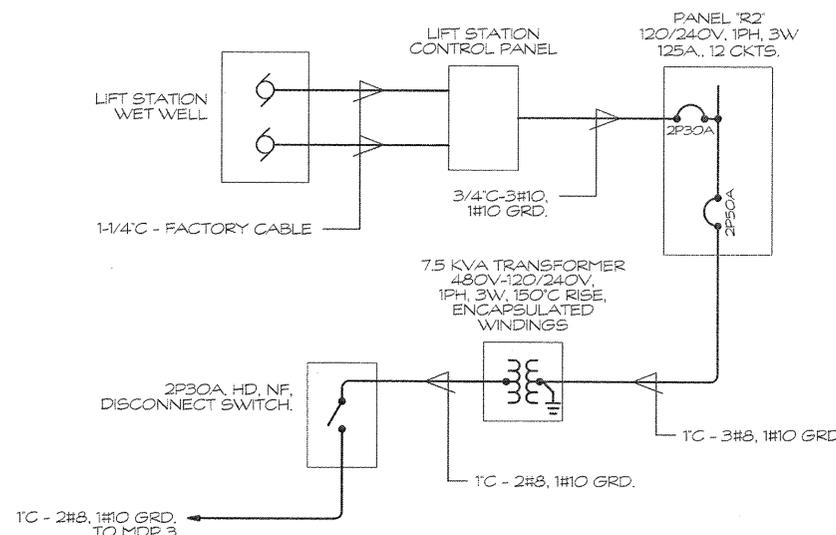
PANEL SCHEDULE: PANEL "R2"
 Voltage: 120/240V Phase: 1 Wire: 3 Bus Amps: 125A W/2P50A MAIN BRKR No. Ckts: 12
 Mounting: SURFACE NEMA Config: 1 Breaker Type: Plug In - 10,000 AIC Minimum

Ckt	Description	Ph A	Ph B	Brkr	Wire	Ckt	Description	Ph A	Ph B	Brkr	Wire
1	R-STORAGE	1.0		1P20	12	2	L-MENS, WOMENS, STORAGE	1.0		1P20	12
3	R-MEN & WOMEN RM.	1.0		1P20	12	4	L-EXTERIOR	1.0		1P20	12
5	MUSCO CONTROLLER	0.5			12	6	SPARE				
7	SPARE					8	SPARE				
9	SPARE					10	SPARE				
11	SPARE					12	LIFT STATION	1.0		2P30	10



PARTIAL SINGLE LINE DIAGRAM (RESTROOM BLDG. #1)

NOT TO SCALE



PARTIAL SINGLE LINE DIAGRAM (RESTROOM BLDG. #2)

NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

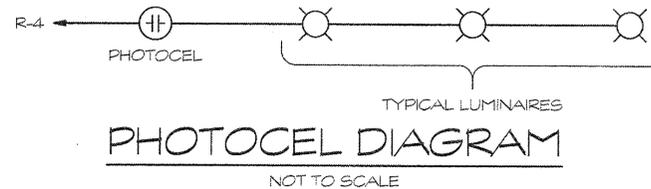
STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION
CENTRAL MAUI REGIONAL SPORTS COMPLEX
 PHASE 4
 WAILUKU, MAUI, HAWAII

RESTROOM ELECTRICAL POWER & LIGHTING

DESIGNED: D.S. SUBMITTED: --
 DRAWN: K.N./E.S. DATE: AUGUST 2016
 CHECKED: D.S. SCALE: AS NOTED
 APPROVED: *[Signature]* R. M. TOWILL CORPORATION
 CHIEF ENGINEER AUG - 8 2016 DATE E-11

LUMINAIRE SCHEDULE		
⊕	DAYBRITE V2WAB232-UNV-1/2-EB101 OR APPROVED EQUAL	4' 2-LAMP, VAPORTITE FLUORESCENT LUMINAIRE WITH ONE PIECE FIBERGLASS REINFORCED POLYESTER BODY, GASKETED ACRYLIC LENS, & STAINLESS STEEL LATCHES. (2) F32T8 LAMPS (3500K) AND ELECTRONIC BALLAST.
⊕	DAYBRITE V2WAB232-UNV-1/2-EB10R-ES OR APPROVED EQUAL	SAME AS ABOVE EXCEPT WITH EMERGENCY BATTERY BACK-UP.
⊕	KENALL N1048C232SIDV OR APPROVED EQUAL	4' 2LAMP, HIGH ABUSE, SURFACE MOUNTED FLUORESCENT LUMINAIRE. (2) F32T8 LAMPS (3500K) AND ELECTRONIC BALLAST.
⊕	KENALL N1048C232SIDVEL OR APPROVED EQUAL	SAME AS ABOVE EXCEPT WITH EMERGENCY BATTERY BACK-UP.
⊕	DAYBRITE CRIQP-LED-NIC HOUSING WITH CRL6KG11035KU-CRL6RCLR LED MODULE OR APPROVED EQUAL	6" DIA, RECESSED, LED DOWNLIGHT HOUSING WITH 1000 LUMEN 3500K LED MODULE WITH CLEAR REFLECTOR AND WHITE TRIM. UL LISTED FOR WET LOCATION.
⊕	KIM LIGHTING 1SA/ALT3P35/60LSK-27V/BRAV5F-15A WITH PRA13-4188-DBA POLE OR APPROVED EQUAL	LED AREA LUMINAIRE WITH EXTRUDED ALUMINUM HOUSING, IP66 OPTICAL MODULE WITH INTERNAL HEAT SINK, 350mA DRIVER WITH 5000K LED, AND 13'-0" TALL ROUND ALUMINUM POLE AND 3'-0" BASE (16'-0" MOUNTING HEIGHT).
⊕	ARCHITECTURAL AREA LIGHTING SLVT-T3-60LED-BW/DBZ WITH PRA4R14-226-DBA POLE OR APPROVED EQUAL	LED AREA LUMINAIRE WITH ONE PIECE CAST ALUMINUM HOUSING, 350mA DRIVER WITH 5000K LED, TYPE III DISTRIBUTION AND 14'-0" TALL ROUND ALUMINUM POLE (14'-0" MOUNTING HEIGHT).
⊕	ARCHITECTURAL AREA LIGHTING SLVT-T5-60LED-BW/DBZ WITH PRA4R14-226-DBA POLE OR APPROVED EQUAL	LED AREA LUMINAIRE WITH ONE PIECE CAST ALUMINUM HOUSING, 350mA DRIVER WITH 5000K LED, TYPE V DISTRIBUTION AND 14'-0" TALL ROUND ALUMINUM POLE (14'-0" MOUNTING HEIGHT).
⊕	KIM LIGHTING 1SA/ALT3P35/60LSK-27V/BRAV5F-25B WITH PRA13-4188-DBA POLE OR APPROVED EQUAL	LED AREA LUMINAIRE WITH EXTRUDED ALUMINUM HOUSING, IP66 OPTICAL MODULE WITH INTERNAL HEAT SINK, 350mA DRIVER WITH 5000K LED, AND 13'-0" TALL ROUND ALUMINUM POLE AND 3'-0" BASE (16'-0" MOUNTING HEIGHT).

SYMBOLS LIST		
—#0	BRANCH CIRCUITS CONCEALED IN CEILING OR WALLS, 2 CONDUCTORS WITH CODE SIZE GROUND UNLESS NOTED OTHERWISE. NUMBER NEXT TO LINE INDICATES SIZE OF CONDUCTORS WHEN OTHER THAN #12.	
⊕	DUPLEX RECEPTACLE, 120V, 20A.	+15" TO BOTTOM UNLESS NOTED.
⊕	DUPLEX RECEPTACLE, 120V, 20A.	MTD ABOVE COUNTER.
\$	SINGLE POLE SWITCH, 120V, 20A.	+48" TO TOP UNLESS NOTED.
\$	THREE WAY SWITCH, 120V, 20A.	+48" TO TOP UNLESS NOTED.
\$	OCCUPANCY SENSOR WALL SWITCH. MATCH PER APPLICATION.	+48" TO TOP UNLESS NOTED.
□	250V NON-FUSIBLE DISCONNECT SWITCH. MATCH PER APPLICATION.	
⊕	JUNCTION BOX.	
■	PANELBOARD.	
□	1X4' FLUORESCENT LUMINAIRE.	SEE LUMINAIRE SCHEDULE.
⊕	RECESSED DOWNLIGHT.	SEE LUMINAIRE SCHEDULE.
⊕	WALKWAY LUMINAIRE.	SEE LUMINAIRE SCHEDULE.
⊕	PARKING LOT LUMINAIRE.	SEE LUMINAIRE SCHEDULE.
⊕	SPORT FIELD LUMINAIRE.	SEE LUMINAIRE SCHEDULE.
GFCI	DENOTES GROUND FAULT CURRENT INTERRUPTER.	
WP	DENOTES WEATHER-PROOF.	



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
 STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION CENTRAL MAUI REGIONAL SPORTS COMPLEX PHASE 4 WAILUKU, MAUI, HAWAII RESTROOM LUMINAIRE SCHED.					
DESIGNED: D.S.		SUBMITTED: -- <i>[Signature]</i>			
DRAWN: K.N./E.S.		DATE: AUGUST 2016			
CHECKED: D.S.		SCALE: AS NOTED			
APPROVED: <i>[Signature]</i>		DRAWING NO.		DATE	
R. M. TOWILL CORPORATION		AUG - 8 2016		E-12	
CHIEF ENGINEER		DATE			