

## FOUNDATIONS:

1. Foundations have been designed to consist of continuous and spread footings bearing on inorganic, undisturbed natural soil or compacted structural fill having an assumed allowable bearing pressure of 2 kips per square foot. The contractor is responsible for verifying these subsurface conditions.
2. Unless otherwise noted, foundations shall be centered under supported members.
3. The bottom of perimeter and exterior foundations not on solid rock shall be at least [5'-0"] below finished grade.
4. Keep foundation excavations free of water at all times. Protect all soil surrounding and under footings from freezing and frost action during the course of construction.
5. Bottom of excavations shall be reviewed by the Structural or Geotechnical Engineer prior to the placement of concrete.
6. Provide formwork for all footings, walls, and piers. Unless otherwise noted, earth formed foundations are not allowed.
7. Place backfill simultaneously on both sides of foundation walls to the grades indicated. Do not backfill or temporarily brace walls with uneven backfill until the floor slab at the top of the wall has been poured and/or the concrete has attained 75% of its design compressive strength.
8. Provide 3/4" maximum aggregate within 12" of slabs on grade.
9. The bottom three (3) inches of footing excavations shall be finished by hand shovel.
10. Use lean concrete ( $f'c = 1,500$  psi) or structural fill for over-excavation of footings.

## REINFORCING STEEL:

1. Reinforcing steel shall be deformed bars, free from loose rust and scale, and conforming to ASTM A615, Grade 60.
2. Welded wire fabric shall conform to ASTM A185. Lap two squares at joints and tie at 3'-0" a.c. Furnish WWF in flat sheets.
3. Welded wire fabric shall be supported on concrete bricks sp. at 24" a.c. each direction on grade. Welded wire fabric shall be supported on elevated deck with continuous bolsters located over joists and beams.
4. Clear concrete cover over bars shall be as follows unless otherwise noted (see ACI 318 for conditions not noted):
 

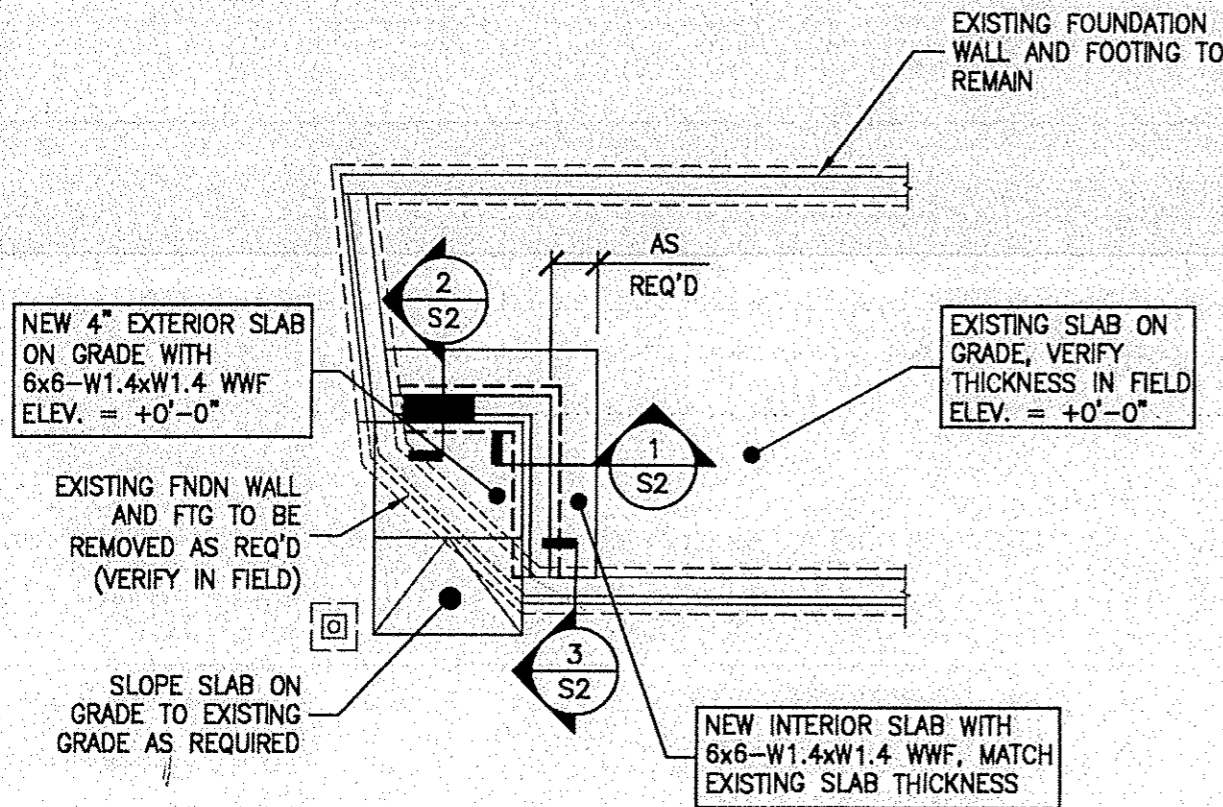
Footings:	3 inches (bottom), 2 inches (top and side)
Walls and Piers (exposed to earth):	2 inches (side)
Walls and Piers (interior):	1 1/2 inches (side)
Elevated slabs:	1 inch (top)
Slab on grade:	2 inches (top)
5. Accessories shall have upturned legs and be plastic-dipped after fabrication. Accessories for reinforcing shall be in accordance with ACI current edition.
6. Lap reinforcing to develop the full tension capacity of the (smaller) bar.
7. No bars shall be cut or omitted in the field because of sleeves, duct openings or recesses. Bars may be moved aside without change in level with the prior approval of the Structural Engineer.

## CONCRETE:

1. All concrete work shall conform to the requirements of ACI 301 "Specifications for Structural Concrete" and ACI 318 "Building Code Requirements for Structural Concrete".
2. Concrete shall be a mix designed for ultimate strength in accordance with ACI 211.1 to achieve the following minimum 28-day compressive strengths:
 

Foundation Footings, Walls, Columns, Piers, Grade Beams, and Pile Caps:	3,000 psi, Normal Weight
Max Slump (without plant added water reducer) =	4" +/- 1"
Max Slump (with plant added water reducer) =	4" to 6"
Max W/C Ratio =	0.55
Air Entrainment =	6% +/- 1%
Interior Slabs on Grade:	3,500 psi, Normal Weight
Max Slump (without plant added water reducer) =	4"
Max Slump (with plant added water reducer) =	4" to 6"
Max W/C Ratio =	0.50
Exterior Site Slabs:	4,000 psi, Normal Weight
Max Slump (without plant added water reducer) =	3"
Max Slump (with plant added water reducer) =	4" to 6"
Max W/C Ratio =	0.45
Air Entrainment =	6% +/- 1%
3. Concrete shall conform to the following:
 

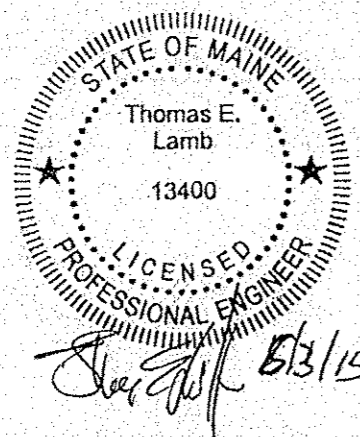
Cement:	Portland cement type I/II ASTM C150
Flyash:	ASTM C818 Class C 20% to 35% or Class F 15% to 25%
Ground granulated blast-furnace slag:	ASTM C989 50% maximum
Course aggregate:	ASTM C33 3/4" for normal weight or ASTM C330 3/4" for light weight
4. Concrete shall be placed under the supervision of an American Concrete Institute (ACI) qualified testing agency.
5. Mechanically vibrate and consolidate freshly cast concrete around reinforcing bars and against form surfaced to prevent the formation of air or stone pockets, honeycombing, pitting, or planes of weakness. Do not over vibrate such that aggregate separation occurs.
6. Cure and protect slabs for not less than seven (7) days with a curing compound conforming to ASTM C309 compatible with any intended floor overlay. Do not install finish flooring until the slab has adequately cured.
7. Top of foundation walls shall be smooth and level.
8. Maintain concrete temperature during periods of hot weather below 90 degrees (F).
9. Exposed concrete shall be rubbed immediately after removal of forms, see architectural drawings for finish type. Unless otherwise noted, interior finish slab surfaces shall have a Class A steel trowel finish.
10. Openings in concrete walls shall be located, sized, and reinforced (with the exception of small openings and/or sleeves of a size that will not displace or interrupt the continuity of the reinforcing) as shown on respective details. Any alterations require approval of the Structural Engineer.
11. Do not backfill foundation walls until the concrete has been in place for seven (7) days and attained 75% of its design compressive strength.
12. Submittals to the Structural Engineer are required for concrete mix designs including cementitious materials, aggregates, and admixtures.



## FOUNDATION PLAN

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

1. DO NOT SCALE THIS DRAWING, VERIFY ALL DIMENSIONS AND ELEVATIONS NOT INDICATED WITH ARCHITECTURAL DRAWINGS.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.



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500 FOREST AVE  
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## NEW RAMP AND FOUNDATION

REFERENCE DWG	-	TFM JOB No.	31345.21
DATE	05/01/2015	SCALE	1/8"=1'-0"
		DR. BY	ESP

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