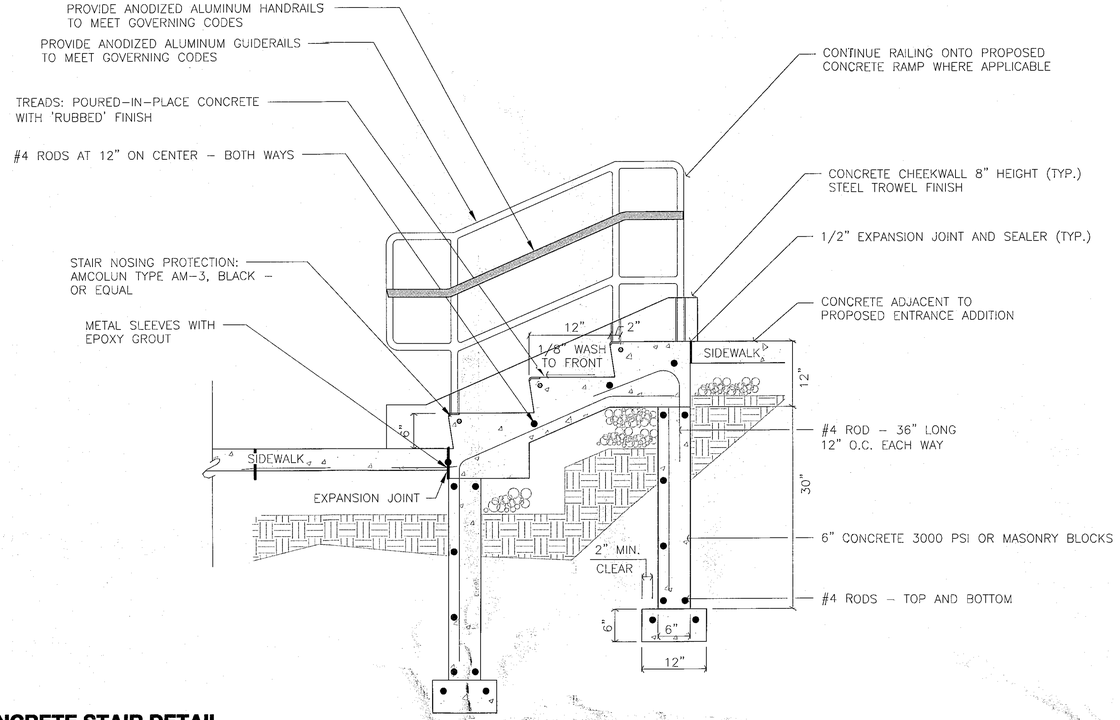


1 CONCRETE STAIR DETAIL
SCALE: N.T.S.

RAMP NOTES:

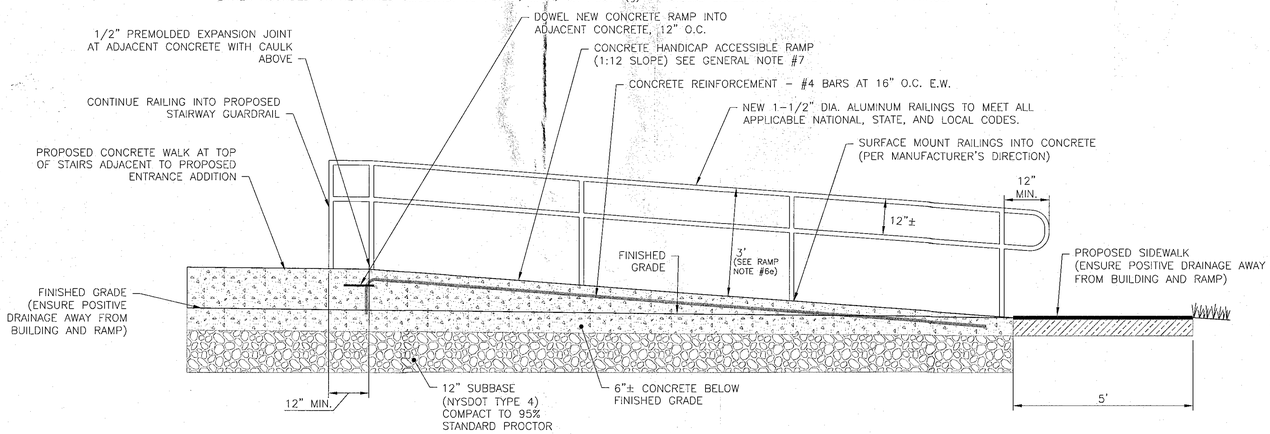
1. INSTALL RAMP AND RAILINGS TO MEET ALL LOCAL, STATE, AND FEDERAL GUIDELINES.
2. OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES. THE MINIMUM CLEAR WIDTH OF A RAMP SHALL BE 36 IN (915 MM).
3. RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP AND EACH RAMP RUN. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:

   (1) THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT. (2) THE LANDING LENGTH SHALL BE A MINIMUM OF 60 IN (1525 MM) CLEAR. (3) IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60 IN BY 60 IN (1525 MM BY 1525 MM).

4. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL SHALL BE 1-1/4 IN TO 1-1/2 IN (32 MM TO 38 MM), OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2 IN (38 MM) MIN.
5. STRUCTURAL STRENGTH. THE STRUCTURAL STRENGTH OF HANDRAILS, AND MOUNTING DEVICES SHALL MEET THE FOLLOWING SPECIFICATION:

   (1) BENDING STRESS IN A HANDRAIL INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE HANDRAIL. (2) SHEAR STRESS INDUCED IN A HANDRAIL BY THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE HANDRAIL. IF THE CONNECTION BETWEEN THE HANDRAIL AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS. (3) TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF (1112N) PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE. (4) GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
6. HANDRAILS SHALL HAVE THE FOLLOWING FEATURES:

   (a) HANDRAILS SHALL BE PROVIDED ALONG BOTH SIDES OF RAMP SEGMENTS. THE INSIDE HANDRAIL ON SWITCHBACK OR DOGLEG RAMPS SHALL ALWAYS BE CONTINUOUS. (b) IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12 IN (305 MM) BEYOND THE TOP AND BOTTOM OF THE RAMP SEGMENT AND SHALL BE PARALLEL WITH THE FLOOR OR GROUND SURFACE. (c) THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1 - 1/2 IN (38 MM). (d) GRIPPING SURFACES SHALL BE CONTINUOUS. (e) TOP OF HANDRAIL GRIPPING SURFACES SHALL BE MOUNTED BETWEEN 34 IN AND 38 IN (865 MM AND 965 MM) ABOVE RAMP SURFACES. (f) ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST. (g) HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.



3 CONCRETE RAMP DETAIL
SCALE: N.T.S.

NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING INFORMATION.
2. INSTALL RAILINGS TO MEET ALL LOCAL, STATE, AND FEDERAL GUIDELINES.
3. OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES. THE MINIMUM CLEAR WIDTH OF A RAMP SHALL BE 36 IN (915 MM).
4. RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP AND EACH RAMP RUN. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:

   (1) THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT.

   (2) THE LANDING LENGTH SHALL BE A MINIMUM OF 60 IN (1525 MM) CLEAR.

   (3) IF RAMPS CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60 IN BY 60 IN (1525 MM BY 1525 MM).
5. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL SHALL BE 1-1/4 IN TO 1-1/2 IN (32 MM TO 38 MM), OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2 IN (38 MM) MIN.
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   (1) BENDING STRESS IN A HANDRAIL INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE HANDRAIL.

   (2) SHEAR STRESS INDUCED IN A HANDRAIL BY THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE HANDRAIL. IF THE CONNECTION BETWEEN THE HANDRAIL AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.

   (4) TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF (1112N) PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.

   (5) GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
7. HANDRAILS SHALL HAVE THE FOLLOWING FEATURES:

   (1) HANDRAILS SHALL BE PROVIDED ALONG BOTH SIDES OF RAMP SEGMENTS. THE INSIDE HANDRAIL ON SWITCHBACK OR DOGLEG RAMPS SHALL ALWAYS BE CONTINUOUS.

   (2) IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12 IN (305 MM) BEYOND THE TOP AND BOTTOM OF THE RAMP SEGMENT AND SHALL BE PARALLEL WITH THE FLOOR OR GROUND SURFACE.

   (3) THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1 - 1/2 IN (38 MM).

   (4) GRIPPING SURFACES SHALL BE CONTINUOUS.

   (5) TOP OF HANDRAIL GRIPPING SURFACES SHALL BE MOUNTED BETWEEN 34 IN AND 38 IN (865 MM AND 965 MM) ABOVE RAMP SURFACES.

   (6) ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.

   (7) HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

2 TYPICAL ADA HANDRAIL NOTES
SCALE: N.T.S.

PLANNING BOARD APPROVAL

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK
By direction of the Chairman,
These drawings are hereby approved.
See sheet(s) 2 of 12
for date and signature.

TOWN OF BETHLEHEM, NEW YORK
PLANNING DEPT. ORIGINAL
- SCANNED -
0 1 INCHES 2

OWNER/APPLICANT

Bethlehem Lutheran Church
85 Elm Avenue
Delmar, New York 12054

BEFORE WORK IS STARTED, CONTRACTOR SHALL VERIFY ALL THE DIMENSIONS AT THE SITE AND IMMEDIATELY NOTIFY THE ARCHITECT OF ALL DISCREPANCIES. ALTERATION OF THIS DOCUMENT BY OTHER THAN AN AUTHORIZED LICENSED REGISTERED ARCHITECT IS ILLEGAL AND A VIOLATION OF SECTION 7307 OF THE NEW YORK STATE EDUCATION LAW.

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Revision :
- BID SET 04/18/16
- REBID SET 05/13/16
- PB APPRV. 12/27/16

Drawing Title :
CONSTRUCTION DETAILS

Drawing Number :
SHEET 7 OF 12
SHEET C504

APN : 1234-2 | Date : March 15, 2016 | Drawn by : DPB

Design Development Additions & Alterations
Site Plan Approval Documents

Bethlehem Lutheran Church
85 Elm Avenue, Delmar, New York 12054