

Building Specifications

This is a general document for both new construction and remodeling specifying building requirements for Ace Hardware stores. Changes to these specifications may be made for specific climate, site condition and building situations. All specifications noted or used must meet or exceed all applicable national, state or local building and accessibility codes

Items below apply to the following location:

- Store owner/ contact

- Address or city location

- Ace Project Manager

1. GENERAL REQUIREMENTS

- a. Any type of construction, which is economical or normal for a particular geographical region, can be specified. This can include: pre-engineered metal, pre-cast concrete, concrete block, wood-frame or other. Standard specification is for a single-level building with sales area ceiling height minimum of 14' above finished floor (AFF) to lowest part of ceiling/lighting system.
- b. Exterior storefront/sign backdrop is required as "focal" point over main store entrance/exit. 10 ft. deep front overhang (10 ft. height above sidewalk) over front entry/exit is required. Same shall be built to match existing architectural standards. Special construction detail/finish may be required for this area. Illuminated "Ace" channel letter signing (by owner) to be applied to backdrop. Electrical required specified in this "Electrical-Exterior Signs" section of this document.
- c. 10 ft. deep overhang (10 ft. height above sidewalk) across entire building front
- d. Receiving dock shall be at finished floor grade or ramped to finished floor
- e. *(Optional)* Mezzanine, with stairs, shall be constructed with structural steel, reinforced concrete flooring and wood/steel wall framing. Offices require one-way glass window into sales area positioned at desk seating height. Unisex lavatory as required by local code.
- f. *(Optional)* Front entry vestibule with dual side entrances.
- g. *(Optional)* Raised loading dock, if required by site, to be installed to accommodate the height (48") of a semi-truck trailer.
- h. Outside lawn & garden area to be on **north/east** side of building. Garden area floor to be **concrete/asphalt**, finished at grade (preferred) or ramped to front sidewalk and parking lot. Garden area will be partially covered with 10 ft. deep metal overhang, 14' above finished floor. Garden area to be fenced with aluminum (wrought iron look) fence to be 8' tall or as required by local code or landlord requirement. Fence will be gated with a minimum 6' opening at front of store for access to parking lot and at rear to allow forklift access to the area. Lighting specified in "Electrical-Lighting" section of this document.
- i. Provide 2'x2' access door to front soffit area for sign mounting/wiring/maintenance access.

2. SITE WORK

- a. Parking lot to be at grade with front concrete sidewalk. **Asphalt/concrete** finished and striped. Parking spaces at building to have parking stops. *(Optional)* Parking spaces away from building to have parking stops.
- b. *(Optional)* Parking lot to be curbed from front sidewalk. Asphalt or concrete finished and striped. *(Optional)* with parking stops.
- c. A minimum 10 ft. deep 3,000 psi minimum concrete sidewalk is required along length of entire building front. Provide handicap access at entry/exit doors for cart access
- d. Site work to include foundation/electrical for freestanding pylon and/or monument sign if allowed. Electrical requirements specified in the "electrical-Signs" section of this document.
- e. Provide dumpster enclosure where required by local code.

3. CONCRETE

- a. Concrete building floors/foundation – 3,000 psi minimum reinforced concrete floors and footings as required
- b. Provide 6" diameter pipe bollards at receiving dock overhead door, lawn & garden area, and all exposed building corners
- c. *(Optional)* 5 ft. deep 4,000 psi minimum concrete slab (along building side) is required for use under storage racking in the outside lawn and garden area; remainder of outside lawn & garden surface to be 3,000 psi concrete or asphalt. Regional climate conditions will require concrete over asphalt.
- d. Truck lanes at stock/receiving area, dumpster enclosure and lawn & garden receiving require heavy duty **asphalt/concrete** (4,000 psi minimum) to support delivery vehicles
- e. Provide concrete slab for propane tank. Size to be determined.

4. MASONRY

- a. Brick, stone, stucco or Drivit facing is recommended for exterior storefronts

5. METALS

- a. Provide 4 ft. deep by 10ft. wide metal overhang above stock/receiving area overhead door; 14 ft. AFF.
- b. *(Optional)* 10 ft. deep (by building length) metal overhang required in outside lawn & garden area; 14 ft. AFF or to match roof line.

6. CARPENTRY

- a. Interior partition walls should be wood or steel framed; rear sales area wall should extend to ceiling joist; rear offices, lavatories, break room, etc., walls to allow for minimum 8 ft. high ceilings.
- b. Provide surface mounted horizontal 2"x 4" wood framing member (screwed to framing) 6" AFF and at 7'-6" (90") AFF on all interior sales area walls for Ace fixture anchoring. Confirm wall fixture locations with retailer.
- c. If 12' high wall fixtures used, include 2" X 4" framing member installed at 11' (132") AFF.
- d. Provide cabinets and counters in break room and lavatories. Style and materials to be determined locally.

7. THERMAL & MOISTURE PROTECTION

- a. Provide sound transmission reducing materials around all offices and lavatories.
- b. Insulation – provide roof/external wall insulation as required.
- c. Roofing - Class "A" 20-year as suitable for geographical area. If Exposed insulation, it should be white vinyl backed.
- d. Roof drains and downspouts to outside perimeter or storm sewer connection

8. DOORS, WINDOWS & GLAZING

- a. Provide aluminum storefront/door framing. Same shall be anodized finish with insulated glass (tempered glass where required by code)
- b. Front entry/exit doors to be Single 12 ft. wide bi-parting, motion-activated automatic slider door unit Stanley Dura-Glide 2000 series or equal. Finish being anodized aluminum.
- c. *(Optional)* Front entry/exit doors to be a 3 ft. wide single hinged entry door along with 6 ft. wide pair of hinged, motion-activated automatic exit doors.
- d. *(Optional)* Front entry/exit vestibule doors to each be a pair of 12 ft. wide bi-parting, motion-activated automatic slider door units Stanley Dura-Glide 2000 series or equal. Finish being anodized aluminum.
- e. Garden area entry/exit door to be a single 12 ft. wide bi-parting, motion-activated automatic slider door unit, Stanley Dura-Glide 2000 series or equal. Finish being anodized aluminum.
- f. *(Optional)* Garden area entry/exit door to be a 6 ft. wide pair of hinged, motion activated automatic exit door.
- g. Provide double-acting impact traffic door for opening between sales and stock/receiving area (6ft wide by 8ft tall). Same to be Rubbair Ultra-Lite 1-3/4" ABS with impact panels and windows (or equal).
- h. One 10 ft. wide by 10 ft. high roll-up overhead steel door is required for rear stock/receiving area. 3 ft. wide personnel door is required next to overhead door.
- i. Exterior doors shall be hollow metal doors and frames as required with weather-strip and dead bolt locks; fire exit doors, if required, shall be equipped with panic bar hardware per code
- j. Interior Office and lavatory doors to be hollow metal doors/wood with key locks

9. FINISHES

10. Ceiling systems:

- a. Sales area. Paint all exposed sales area ceiling components including joist, decking, electrical wiring, insulation and HVAC equipment with Benjamin Moore M53 latex flat white dryfall coating (or equal).
- b. Offices, Rest rooms, break room, hallways. Provide 2'x 2' or 2'x 4' suspended fire rated commercial grade ceiling panel and suspension system (5/8" T. square edge USG #821220 "Fifth Avenue" or equal) not less than 8 ft. above finished floor.
- c. Stock/receiving area, service area, utility room - ceiling is unfinished

11. Floor treatment:

- a. Sales Floor. Diamond polished ground hardened finished concrete in the sales area and vestibule. After polishing floor finish surface must be protected with and odorless, non-toxic chemical hardener and densifier.
- b. *(Optional)* Concrete may be stained to neutral earth tone color.
- c. *(Optional)* Integral color may be added to the fresh concrete pre-pour mixture and blended for new concrete/construction. Mock-ups are recommended for demonstrating aggregate exposure, shine, and color options. (Neutral earth tone colors are recommended, determine medium, high or very high gloss finish)
- d. *(Optional)* Sales floor: VCT floor tile Armstrong Standard Excelon Imperial Texture commercial flooring #51899-031 "Cool White".
- e. Stock/Receiving Areas: Exposed concrete with two coats clear sealer
- f. Break room, halls and bathrooms. VCT floor tile Armstrong Standard Excelon Imperial Texture commercial flooring #51899-031 "Cool White". 4" vinyl cover base (black) to be used in all finished rooms except where wall fixtures are installed

- g. Offices: Commercial grade 28 oz carpeting
- h. *(Optional)* Sales area accent flooring: if shown, to be wood plank vinyl flooring, LSI "Earth Series" Wood Collection #1014 (4" X 36" X 1/8") Straight Edge or equal. Same to be provided by retailer and installed either flush with main tile surface or on top with reducer edging- sized per plan.

12. Wall finishes, painting and decorating:

- a. Apply sheetrock to all interior walls (sales area, offices, lavatories, corridor, break room); tape, sand, prime and finish coat.
- b. Wall Colors to be selected locally. Options are (from Ace color selector) C31-5 Gleeful Green, D39-4 Dream Weaver, D20-4 Copley Square, C24-4 Canyon Dust.
- c. *(Optional)* Provide finished sheetrock on all sales area walls except where covered by store fixtures
- d. Interior doors, frames and trim to be primed and finished with semi-gloss enamel; color to be determined by retailer selected from above selections.
- e. Stock/receiving area, service area and utility room walls- unfinished
- f. *(Optional)* Stock/Receiving area, service area and utility rooms to be painted.

13. SPECIALTIES

- a. Provide toilet paper holders, mirrors, grab bars, towel and soap dispensers and coat hooks in all lavatories
- b. Baked enamel partitions in toilets as required.
- c. *(Optional)* Baby changing station required in each lavatory

14. FURNISHINGS

- a. Sales area store fixtures, counters, displays and décor elements to be provided and installed by retailer
- b. Office, break room furniture to be provided by retailer
- c. Break room refrigerator and microwave oven to be supplied by retailer
- d. Stock/receiving area, service area and outside lawn & garden racking and equipment to be provided and installed by retailer

15. SPECIAL CONSTRUCTION

- a. Provide automatic fire protection sprinkler system complete with all necessary related pieces and conforming to requirements of insurance underwriters and local governing authorities if required
- b. Fire monitoring system if required

16. CONVEYING SYSTEMS

- a. *(Optional)* May be required if basement is utilized, this would be at the Ace Store owner expense.

17. MECHANICAL

18. Plumbing:

- a. Provide a complete sanitary waste/vent, storm and domestic water system to point of connection with common area utilities
- b. One men's and one women's lavatory (or one unisex lavatory) sized as required with direct access to sales area
- c. Provide all lavatory/break room plumbing fixtures (toilets, sinks, faucets, etc.) as required

- d. Utility room to include a mop sink
- e. 30 gallon hot water heater
- f. Water fountain to meet local code. Locate the water fountain in conjunction with the retailer
- g. Exterior hose bibs (frost proof if climate requires) at building front and rear.
- h. *(Optional)* Floor drains in stock/receiving area and bathrooms. Floor drain by store entry door if required
- i. *(Optional)* Exterior hose bib and floor drain as above (1 per 2,000 sq. ft.) in outside lawn & garden area

19. HVAC:

- a. Unit(s) should be **roof or *(Optional)* ground mounted** with insulated ducts either gas-fired or electric per local availability. Air conditioning units required with separately metered gas/electric service with piping and temperature control system including "economizer" night cycles. Minimum one (1) ton per 400 retail square feet
- b. Unit(s) shall be sized to maintain not less than 70 degrees F. for an outside design temperature of - 10 degree F. and 10% fresh air intake and 72 degree F. with 100% relative humidity at ambient outdoor temperature of 95 degree F. (outdoor temperature requirements may vary depending on regional climate)
- c. Provide programmable or time clock controlled setback thermostats
- d. Office area to have separate zone with thermostat
- e. Individual lavatory exhaust systems required

20. ELECTRICAL

21. General requirements

- a. Transformer, if any, must be located outside the building for noise and heat reduction
- b. Provide separate conduit or dual channel power pole drops to conceal cabling/power from above ceiling space to any column/counter-mounted equipment. All wiring and cabling to be dropped from ceiling, NOT in slab
- c. Separate overhead duct or cable raceway required for computer, power and phone lines.
- d. Business class broadband service must be available to the building
- e. Separate home runs required from each computer/phone jack location including checkout counters, paint mix area, rear service area counters, lawn & garden counter (if required), rear offices, break room, stock/receiving area and selected building column or display fixture locations. All terminating at rear server, patch/router or main phone/electrical panel location. *(Optional)* Overhead conduits can be deleted for low voltage phone/computer cabling if code allows wires to run exposed
- f. *(Optional)* Cable raceway to outside lawn & garden area terminating in weather-rated housing at outside wall of building for phone and computer lines
- g. Provide GFI weatherproof duplex receptacles at exterior front and rear of building
- h. *(Optional)* Explosion-proof electrical circuit to Propane filling station
- i. *(Optional)* 120v 20amp GFI weatherproof duplex receptacles (2 per 1,000 sq. ft.) in outside lawn & garden area

22. Power to displays/equipment

- a. Fixture (Shelving) mounted Receptacles
 - i. Walls Units - Provide junction boxes in wall to code at typical height to feed cable whip for convenience receptacles on retailer's fixture deck kick plate. This should not

- interfere with the surface mounted horizontal 2"x 4" wood framing member (screwed to framing) 6" AFF. Space junction boxes approximately 28'-0" apart or per code.
- ii. *(Optional)* Provide wall mount duplex receptacles above wall fixtures as shown on plan or per retailer. Duplex receptacles are mounted 8' 6" above AFF to the center of the receptacle.
 - iii. *(Optional)* Provide junction boxes above wall fixtures to allow for fluorescent lighting mounted into wall shelving. Junction boxes are mounted 8' 6" above AFF to the center of the receptacle.
 - iv. Gondola Units - Ceiling mount junction box above island fixtures as shown on plan or as per retailer. Drop EMT conduit from junction box down to top of fixture and install steel handy box with duplex receptacle to top of shelving fixture. Extend conduit along fixture top for additional duplex receptacles if needed. Power should extend to all main aisle display end caps. Verify final display list and locations with retailer
- b. *(Optional)* Provide power drops on each interior column. Mount duplex receptacle to code at typical height. Verify the positioning of the column mounted receptacle with the retailer prior to mounting. To assure the receptacles are not mounted in conflict to the wrong side of the column resulting in a limited usage.
 - c. Ceiling mount junction box above checkout, paint or service counters as shown on plan. Drop dual channel power pole from ceiling to floor for voice and data cabling/electrical power
 - d. Point of sale (POS) checkout counters/rear service counter- provide one standard 120v 20amp quad receptacle and one 120v 20amp duplex receptacle with isolated ground per location. Additional 120v 20amp duplex receptacle with isolated ground required for laser printer location
 - e. Provide duplex receptacles at retailer's impulse end cap fixture for vending equipment, etc.
 - f. Paint mix counter- provide one standard 120v 20amp quad receptacle and one 120v 20amp duplex receptacle with isolated ground at paint customer service counter; provide two standard 120v 20amp duplex receptacles and two 120v 20amp duplex receptacles with isolated ground at rear paint mixing counter.
 - g. Doors - Provide 120v 20amp electrical service above door header for automatic sliding entrance/exit doors at front and garden area as per plan.

23. Lighting (see reference plan)

- a. Sales area lighting level to be targeted at 100 foot-candle at 5' AFF after fixtures and inventory installed. Must meet local energy usage requirements based on municipality.
- b. Open ceilings - Sales area lighting should be 8 ft. double tube strip fluorescent fixtures with four- 4 ft. T8 lamps, energy efficient electronic ballasts and reflectors. Lighting should be chain-mounted as per Ace approved plan, or in continuous rows on approximately 8 ft. centers @ 14'-0" AFF running perpendicular to island fixture runs. Perimeter fixture runs should be installed approximately 4'-0" off front, back and side walls
- c. *(Optional)* Fluorescent fixture installation, as above, to be mounted to unistrutt supports and hung by threaded rod
- d. Open Ceilings – Sales area lighting should be T-8 fixture with 6 tubes
- e. Acoustical drop in ceilings - Sales area lighting should be 8 ft. double tube strip fluorescent fixtures with four- 4 ft. T8 lamps, energy efficient electronic ballasts and reflectors. Lighting should be surface mounted as per Ace approved plan, or in continuous rows on approximately 8 ft. centers @ 14'-0" AFF running perpendicular to island fixture runs. Perimeter fixture runs should be installed approximately 4'-0" off front, back and side walls
- f. *(Optional)* Wall fixture canopy lighting, if used, to be single-tube fluorescent at 8 and 12 ft. levels with separate switching

- g. Sales area fluorescent lamps to be GE SPX35 F32 T8 Eco style 32 watt color corrected (or equal)
- h. *(Optional)* Sales area track lighting/hang down lamps at paint/service counters to be supplied by retailer; installed by contractor
- i. Provide for after hours security lighting in sales area, stock/receiving and rear office area
- j. Rear office, break room, corridor and lavatory lighting to be 50 foot-candles (minimum); provide recessed fluorescent T-8 troffer fixtures with diffusers, 4 lamps and energy efficient electronic ballasts
- k. Stock/receiving and utility room lighting to be 30 foot-candles (minimum); provide T-8 fluorescent ceiling-mounted fixtures with wire safety guards
- l. Provide energy efficient exterior security lighting at all exterior doors with electric eyes and time clock.
- m. Provide emergency lighting with battery back-up and exit signs as required
- n. Exterior flood light required above rear receiving door
- o. Provide parking lot and building outdoor security lighting as required. 3 foot-candles (minimum) typical
- p. *(Optional)* Weather-proof lighting required for outside lawn & garden area

24. Exterior signs

- a. Exterior signs. 3-120v 20amp dedicated circuits (2 for building front, 1 for pylon/monument sign) required with photo cell or time clock control. Provide 2'x2' access door to front soffit area for sign mounting/wiring access. Noted in general construction requirements. Verify additional exterior signing requirements, if any, with retailer
- b. *(Optional)* Electronic message center (EMC) requires 1-2 120v 20amp dedicated circuits with low voltage cable running from dedicated inside computer to EMC sign location

25. Computer Equipment

- a. All computer equipment to be provided and installed by retailer. Data cabling and all terminations by Contractor
- b. Use Cat-5 568B or better low voltage cable for all phone (voice) and computer (data) lines.
- c. RJ-45 data jacks to be located:
 - i. 2 at each checkout
 - ii. 1 at customer service counter
 - iii. 1 in each office
 - iv. 1 in break room
 - v. 1 in training room
 - vi. 1 at paint counter
 - vii. 1 in receiving/storage
 - viii. Provide RJ45 data jack in sales area ceiling for radio frequency access point
- d. Computer network server to be located in rear bookkeeper's office, wiring closet or other accessible climate controlled location. Server requires two RJ11 voice jacks for dedicated phone lines. Note: one stand-alone line for system communications modem; second for system credit card modem (second voice line can be shared with fax machine)

26. Telephone Equipment

- a. All phone equipment to be provided and installed by retailer. Voice cabling and all terminations by Contractor

- b. Use Cat-5 568B or better low voltage cable for all phone (voice) and computer (data) lines.
- c. Minimum 6 line phone system consisting of 4 voice lines, 1 fax/computer line and 1 dedicated computer data dial up line
- d. RJ-11 voice jacks to be located:
 - i. 2 at each checkout counter
 - ii. 1 at customer service counter
 - iii. 1 in each office
 - iv. 1 in break room
 - v. 1 in training room
 - vi. 1 at paint counter
 - vii. 1 in receiving/storage
- e. Service counter(s) - requires one RJ11 voice jack and one RJ45 data jack
- f. Use surface mount jacks- RJ11 (voice) or RJ45 (data). Rear offices jacks to be flush mount face plates.
- g. Rear offices/other rooms- require one RJ11 voice jack and one RJ45 data jack each. Locate to minimize excess cord requirements

27. Security Equipment

- a. Confirm security system electrical requirements with retailer. Burglar alarm, 9 channel closed circuit TV, electronic article surveillance or POS/DVR interface systems, if used, to be provided and installed by owner
- b. Separate RJ11 voice jacks may be required for fire alarm and security systems. Locate in Manager's office.

28. Audio Equipment

- a. Sound system (see reference plan) required for intercom, public address and in-store music/messaging in sales area. Same to be 70 volt with #18 AWG 2 conductor wire between individual speakers (8-12 typical) with single homerun to amplifier and music source units. Provide duplex electrical receptacle and shelf within 6 ft. of main telephone panel. Retailer to provide speakers, amplifier and music source units; contractor to install
- b. *(Optional)* Coverage may include individual offices, break room, stock/receiving, service area and outside lawn & garden. If individual volume controls required, provide single electrical box at light switch height stubbed to ceiling for speaker wiring
- c. *(Optional)* Outside lawn & garden speakers and controls to be weather proof
- d. Locate all voice, data and electrical receptacles on raceway below counter surface