
# Gaston County Jail Expansion

**September 18, 2017**

**Project No. 1570**

Stewart · Cooper · Newell · Architects
Architecture Planning Interiors

719 east second ave.
gastonia, nc 28054
phone: 704.865.6311
fax: 704.865.0046

1.800.671.0621
www.scn-architects.com

2016 sumter street ste.202
columbia, sc 29201
phone: 803.765.9011
fax: 803.765.2011

GASTON COUNTY SEAL N. C. 1848


# 1 - Summary

## SUMMARY

This report presents the findings of a study performed for Gaston County detailing the facility needs of the Gaston County Jail. The study was undertaken by Stewart – Cooper – Newell Architects, Gastonia, NC. It was performed as a collaborative effort between the county staff, the sheriff and staff and the architect. Much data, on-site dialog, analysis, and facility reviews allowed for the proper sharing of information that allows this document to accurately reflect the current and future needs of the Gaston County Jail Facility.

As is detailed and expanded upon in the following sections, Gaston County has and is continuing to experience growth. The growth indicated in past historical data has required county facilities to grow and change to meet the demands of the population, which has put pressure on both its physical facilities and its personnel.

The population of Gaston County as a whole may increase at a rate significantly higher than the historical trends; depending on the effect growth from Charlotte has over the upcoming 20 years.

The current 176,758 square foot facility has served the county well for almost 20 years; but, because of the current demands, it is no longer able to provide the space that the jail requires. This report outlines the specific space needs and the recommendations of how best to meet these needs. The following data summarizes the details that follow.

The study of the facility along with the understanding of budget restraints has led to the conclusion that the projects should be broken into three phases which vary from the previous 2006 study. It is extremely important to understand that jails are very expensive to build and over the long term cost much more to operate and maintain. The initial construction needs to be as durable and maintenance free as possible. They must be able to function 24 hours a day, every day, for years.

The Three Phases are as follows:

Phase I – Install 30, 2-man cells.
Install 12, 1-man cells in 'A' Block
Total added Bed Count – 72

Phase II – Expansion of Kitchen, Storage, Medical, Classrooms, Property Storage, Dining Space, Locker Rooms and Administrative Area for additional staff.

Phase III – Addition of 224 additional cells adding 440 beds plus associated utilities and staff areas.

PHASE 1 – Description of the work

The installation of 30- two man cells, the installation of 12-one man cells in "A" Block, all to be located in the 4 first floor recreational areas. The cells will be 2" thick concrete filled panel components as manufactured by TRUSSBILT. There is only one manufacturer of this type of cell.

The cells components will be brought in thru an opening cut in the exterior wall below the fresh air louvers. An access door and frame will be anchored in the opening to allow staff access to plumbing, mechanical, electrical, sprinkler and security equipment for future maintenance. Due to the age of all of the Security Electronic Systems, it will be replaced.

The pod showers and toilet doors should be replaced and the walls and the ceilings need to be redone. In addition, new plumbing, mechanical, electrical and fire protection will need to be installed.

General capital improvements will be needed as well.

Preliminary Conceptual Budget for the addition of 30-two bed cells and 12 single bed cells.

This budget was derived from information and cost obtained from various detention equipment manufacturers and suppliers. This is not intended to be a substitute for the Completion of Construction Documents and Competitive bids received from General Contractors, Sub-contractors and Detention Equipment Sub-Contractors.

| DESCRIPTION | COST |
|---|---|
| ***1. Site Work*** | $ 60,000.00 |
| ***2. Exterior Doors*** | $ 108,000.00 |
| ***3. Cells*** | $2,618,000.00 |
| ***4. Electronics/Security*** | $475,000.00 |
| ***5. Walls Above Cells*** | $66,250.00 |
| ***6. Ceilings*** | $10,000.00 |
| ***7. Shower and Toilet Doors*** | $160,000.00 |
| ***8. Miscellaneous Capital needs*** | $732,000.00 |
| ***9. Plumbing, Mechanical, Electrical & Fire Protection*** | $1,995,000.00 |
| ***10. Security Gate Revision*** | $250,000.00 |
| ***Sub-total*** | $6,474,250.00 |
| ***Contingency 10%*** | $647,425.00 |
| ***Sub-total*** | $7,121,675.00 |
| ***Fees 8%*** | $569,734.00 |
| ***TOTAL CONCEPTUAL BUDGET*** | **$7,691,409.00** |

**Conceptual Budget Breakdown:**

| | | |
|---|---|---|
| 1. | **Site Work** | **$60,000.00** |
| | A. Grading | |
| | B. Building Protection | |
| | C. Fencing | |
| | D. Gravel | |
| | E. Clean-up | |
| | F. Grassing | |
| 2. | **Exterior Doors** | **$108,000.00** |
| | A. Mech. Room Exterior doors and panels, Stainless Steel & frame | $32,000.00 |
| | B. Hardware (Stainless Steel) | $20,000.00 |
| | C. Labor | $12,000.00 |
| | D. Cut Precast OPG. | $12,000.00 |
| | E. SS Flashing | $8,000.00 |
| | F. Anchors | $8,000.00 |
| 3. | **Cells** | **$2,618,000.00** |
| | A. Cells (42) & Decks & Stairs | 2,242,000.00 |
| | B. Security Caulking | $40,000.00 |
| | C. Painting | $120,000.00 |
| | D. Equipment Rental | $120,000.00 |
| | E. Concrete & Pumping | $80,000.00 |
| | F. Welding & Finishing | $16,000.00 |
| 4. | **Electronics** | **$475,200.00** |
| | A. Complete upgrade for Security and Electronics | |
| 5. | **Wall above cells** | **$66,520.00** |
| | A. Walls (Metal Studs @ 16" O.C., Security Mesh – 2 sides, 5/8" Type 'X' Gyp. BD. – 2 Sides ,5 ½" insulation) | $26,520.00 |
| | B. Caulk & Paint | $40,000.00 |
| 6. | **Ceilings** | **$10,000.00** |
| 7. | **Shower & Toilet Door** | **$160,000.00** |
| | A. Toilet & Shower door replacement (all Stainless Steel) | |
| 8 | **Misc. Needs** | **$732,000.00** |
| | A. Kitchen Equipment | $95,000.00 |
| | B. Food Carts | $92,000.00 |
| | C. Hot water Heater | $90,000.00 |
| | D. Security window in Pod control replacement | $54,000.00 |
| | E. Door operating Pod control stations | $32,000.00 |
| | F. Shower resurfacing | $160,000.00 |
| | G. Back-up Air Compressor, Piping, Controls | $10,000.00 |
| | H. Securepass Body Scanner | $199,000.00 |
| 9. | **P.M.E & FP** | **$1,995,000.00** |
| | A. Plumbing | $300,000.00 |
| | B. Mechanical | $900,000.00 |
| | C. Electrical | $575,500.00 |
| | D. Fire Protection | $120,000.00 |
| | E. Smoke Removal | $100,000.00 |
| 10. | **Security Gate** | **$250,000.00** |
| | A. Sliding Gate with Overhead track | |

PHASE 2 – Description of the work

Due to financial restraints, it will be necessary to build Phase II at some date in the future.

The work of Phase II will be an expansion of first floor areas which will include the Kitchen, Walk-in Cooler and Freezer, Warehouse space, Commissary, Staff dining and support areas.

On the second floor the medical space would be substantially expanded to accommodate both present and future population growth. The administration has expanded and with a growth in jail population would necessarily need additional space for staff offices, training classrooms, conference room and staff support space.

Phase II should be constructed prior expanding the jail population in Phase III and would be added to the North side of the building.

North Elevation

Preliminary Conceptual Budget

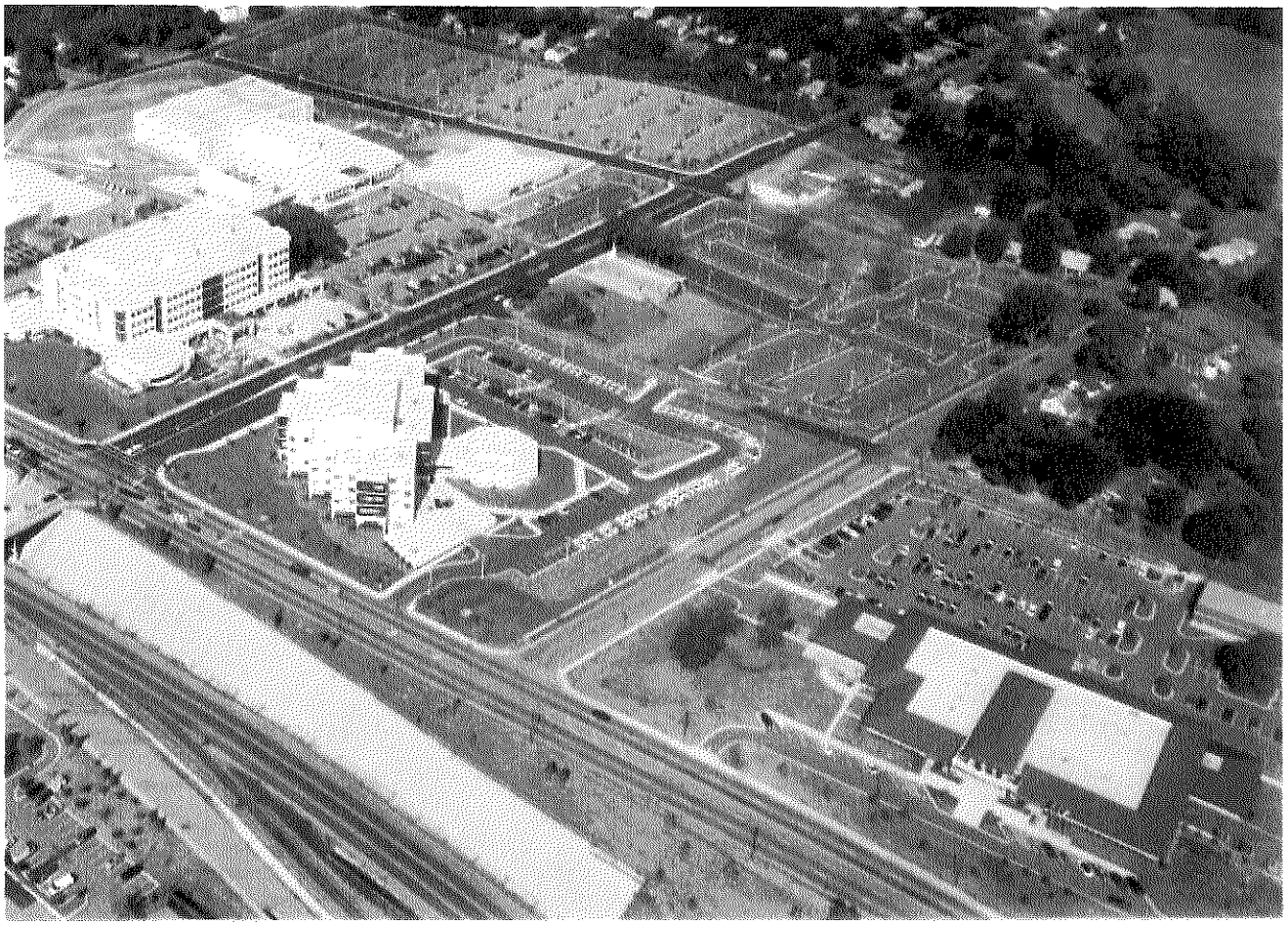
| | |
|---|---|
| 1st Floor Area – | 18,600 S.F. |
| 2nd Floor Area – | 17,200 S.F. |
| Total Area: | 35,800 S.F. |
| Projected Cost per S.F.: | $375.00/SF |
| **Preliminary Conceptual Budget:** | **$13,425,000.00** |

PHASE 3 – Gaston County Jail Expansion

The actual size and the number of cells and necessary support spaces have not been determined at the time of this study. The actual need will be based on future growth projections and programming.

The 2006 study projected a need for 224 additional cells adding 440 beds plus associated utilities and staff areas. This would be added to the west side of the existing building.

West Elevation

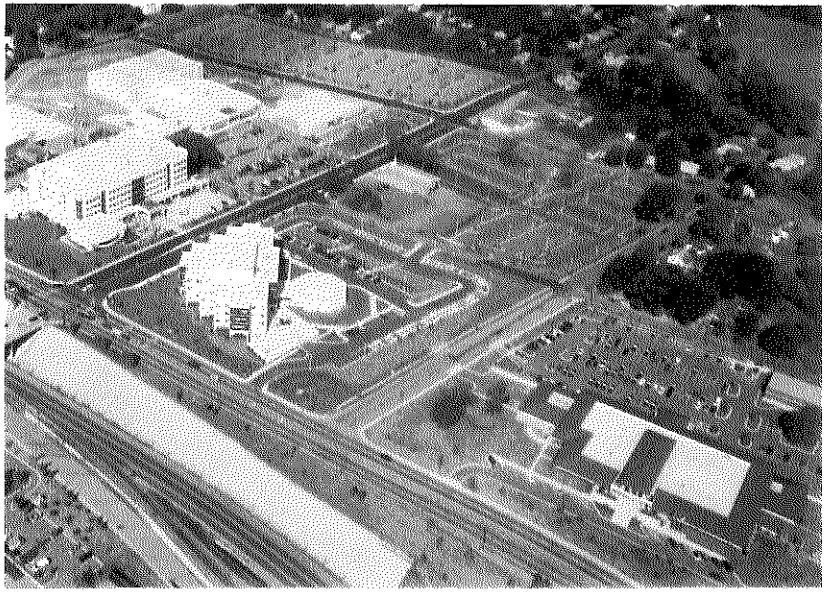


# September 18, 2017

# 2- Facility Assessment

## INTRODUCTION

Gaston County Jail Front Elevation


Judicial and Governmental Complex Aerial View

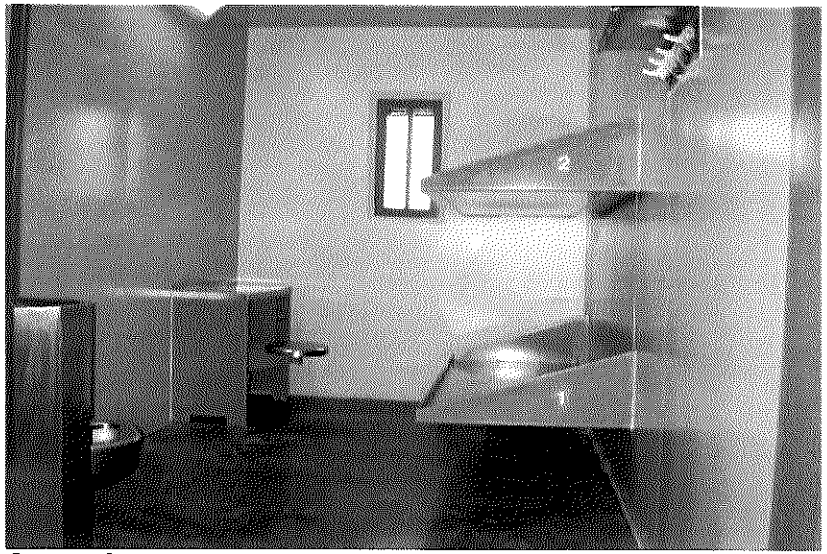
The Gaston County Jail is part of the Judicial and Governmental Complex that was completed in 1999. The Sheriff's Office contains all the administrative functions needed for the department to function efficiently at the time it was completed and for approximately 20 years in the future depending on population growth.

The existing facility was reviewed as part of this study. This review was to ascertain how the existing facility can be renovated and enlarged to provide additional housing for detainees within the existing structure.

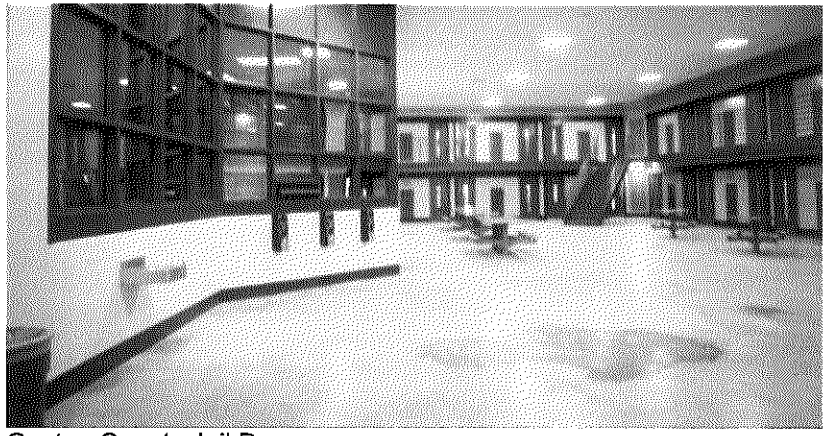
The architects did an in-depth study of the facility and the following is the result of that analysis.

The Jail is equipped with full security services including: CCTV, Touch Screen Computers, Card Key Access, PIN Systems, UPS and Emergency Generators.

It was determined that due to the age of all the components and the addition of 42 new cells it would be necessary to upgrade all the existing electronic security equipment.



Gaston County Jail Two Man Cell



Gaston County Jail Dayroom

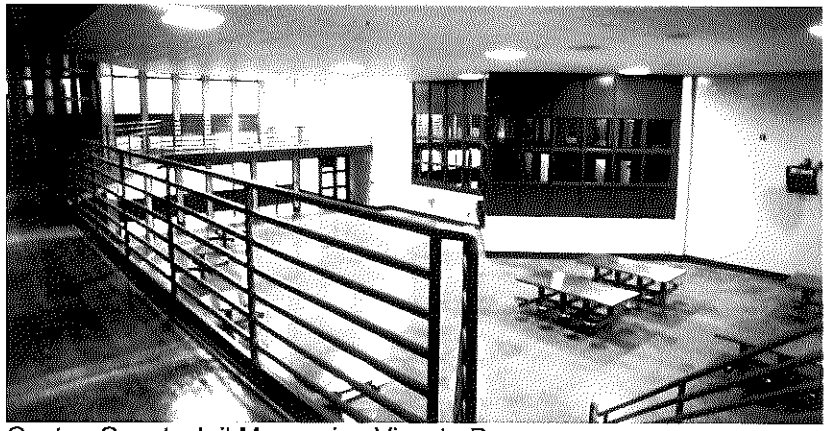
The Jail was designed with 200, 2-man cells and 8, 1-man cells for a total of 408 beds that is divided into several "pods" that are designed to support both direct and indirect supervision. The pods are designed so that an inmate can be placed in a pod and never removed from it except for court appearances.

The study provides an insight into how the 4 existing interior first level recreation areas can be utilized to accommodate 42 additional cells. Of the 42, 30 will be 2-man cell and 12 will be 1-man cells in "A: Block. The first floor of the jail is a slab on grade and has the ability to support the cells.

The second level recreation areas cannot be utilized with cells but could provide additional space for dormitory or classrooms due to structural restraints.

The kitchen facility prepares and cooks three meals a day for all inmates at both the Jail and the adjacent jail annex. The jail annex has 8, 20-man dorms for a total of 160 beds and 16, 1-man cells and is currently used to house female detainees. The total number of beds for both facilities is 584 beds. Operational capacity (90%) is 526 beds.

Expansion of the Kitchen, Warehousing, Staff Facilities will need to be included in a future addition. Medical unit and administration would be included in a future expansion as well.



Gaston County Jail Mezzanine View to Dayroom

Gaston County Jail Kitchen

## CURRENT SPACE ISSUES

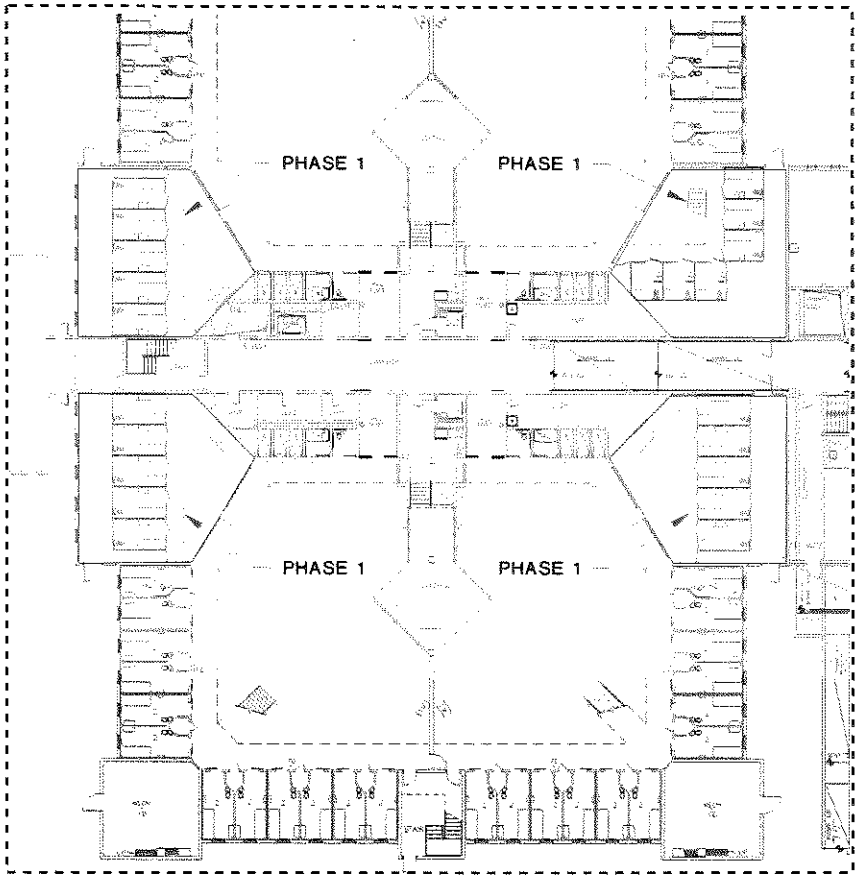
In meetings with the County Staff and Sheriffs Office, the architect identified space requirements, which were based on the present need. The following information was obtained through meetings with the county and detention officials and Stewart – Cooper – Newell Architects. Space requirements were developed for additional cells, medical facilities, kitchen facilities and other relevant spaces. The most immediate needs are:

- Cells – Additional cells are needed. Jail Pod size and configuration was reviewed and produced the following conclusions:
    1. Existing dayrooms and cell size are adequate.
    2. Recreation yards (8 – one per pod) are not used. Consider converting this enclosed outdoor space to interior space with heating/air. Options for use of this space: cells, classrooms, video arraignment if pod is designated for First Appearance, storage, property storage and inmate property storage.
    3. Delete recreation yards from future pods if possible. Review current codes concerning outdoor recreation requirements.
    4. Mirror classification of existing jail. Female inmates to remain in jail annex.
    5. Review design of showers, toilets and doors.
    6. Delete drywall from pod ceilings. Sprinklers ruin drywall; consider exposed concrete or other finishes.
- Classroom Space – classes are currently held in the library.
- Kitchen Space – Currently 1,400 meals are prepared daily. Additional freezer, storage, cart and assembly line space is required. At least twice the storage space required for the kitchen area.
- Medical Ward Space – Isolation cells are currently used for HIV, sick or injured.
- Inmate Property Storage – Property is currently stored in several locations instead of one central location. Change existing weight room to storage. Provide new weight room in administrative addition.
- First Appearance Space – Large detainee area for video arraignment needed.
- Visitation Space – A place for lawyers to meet with detainees with a pass-thru for signing papers is needed.
- Secure Parking - Existing secure parking is where jail administrative expansion will take place. Gate should be changed to a sliding gate due to problems with existing overhead gate. Relocate fence for new, larger secure parking lot.
- Loading Bays – Two existing loading bays are sufficient. Relocate in Phase II.
- Trash Pick-up - Currently pick-up is twice a week. Expansion may require daily pick-up.
- Jail Annex Access - Need better access to the jail annex. Expansion of Administrative space should connect the jail and jail annex.
- Commissary - Provide additional store commissary space. Keep commissary adjacent to loading docks.

## SPACE ISSUES ANALYSIS

The analysis of the existing space and need as well as budget restraints indicated three phase approach for the detention center. Phase I is illustrated.

Phase I provides 42 additional cells (72 beds) by renovating existing recreation yards and auxiliary spaces required by the 42 additional cells including the following:



## SPACE ISSUES ANALYSIS

The analysis of the existing space produced a three phase approach for the detention center. Phase II and III is described.

Phase II provides additional administration:

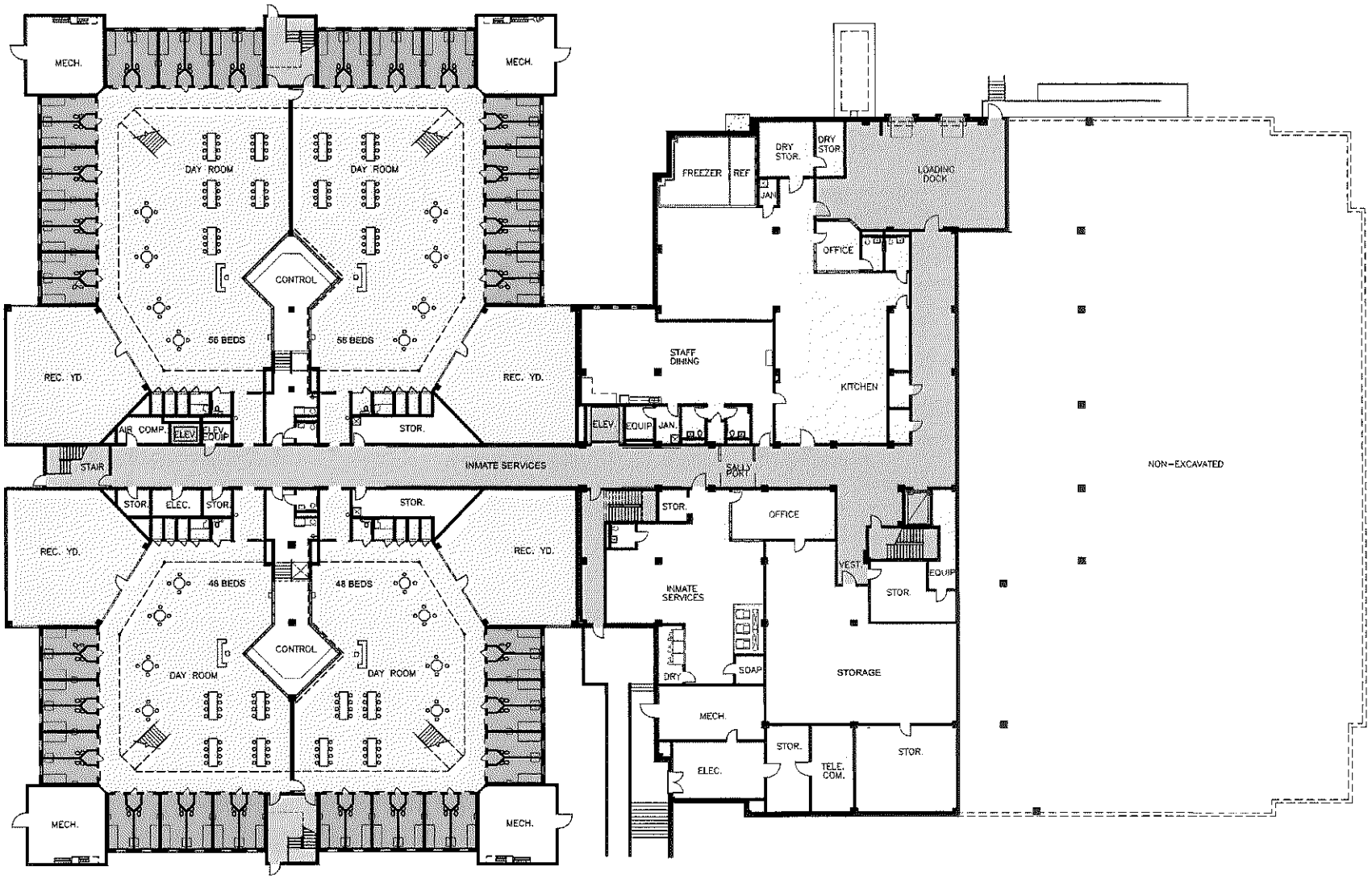
- Expanded Medical Unit
- Classrooms
- Additional kitchen area for freezer, storage, cart storage and assembly line space - addition on the north elevation.
- Additional inmate property storage.
- Additional store box/commissary space.
- Additional support staff space. New support staff will require additional office space, parking space, weight room, dining space, and locker room space.

Phase II would expand the 2 floor existing building on the north side with a total of 35,800 SF.

North Elevation

Phase III provides 224 additional cells (440 beds) in approximately 140,000 SF detention housing addition on the west side of the facility and adds auxiliary space for storage, administration, medical and kitchen services, evidence and inmate storage on the north side of the facility. Site renovations will include additional secure parking, fencing and sliding gates.

West Elevation




DETAINEE USE AREAS

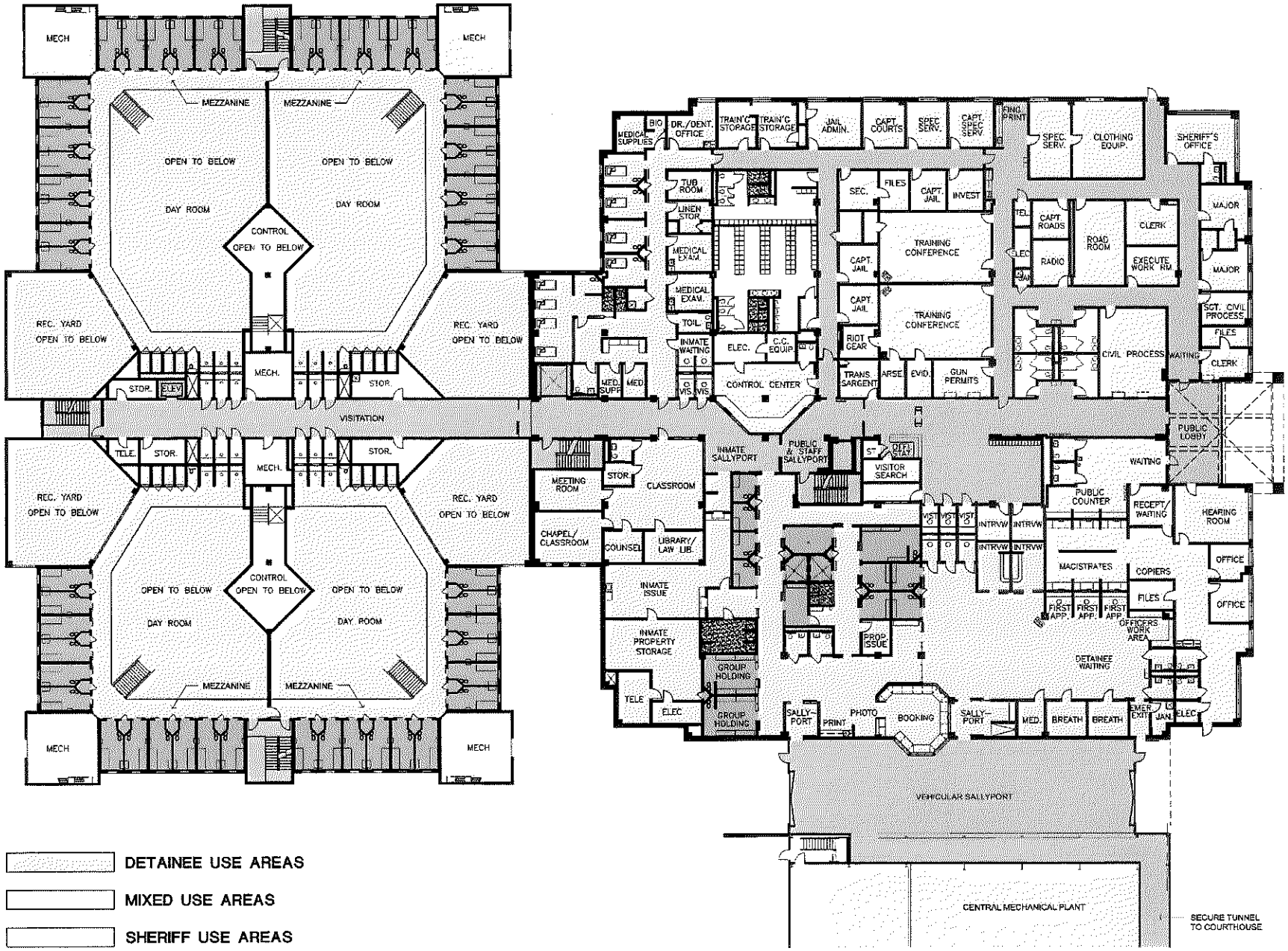
MIXED USE AREAS

SHERIFF USE AREAS

# EXISTING GASTON COUNTY SHERIFF'S OFFICE & JAIL

## FIRST FLOOR PLAN

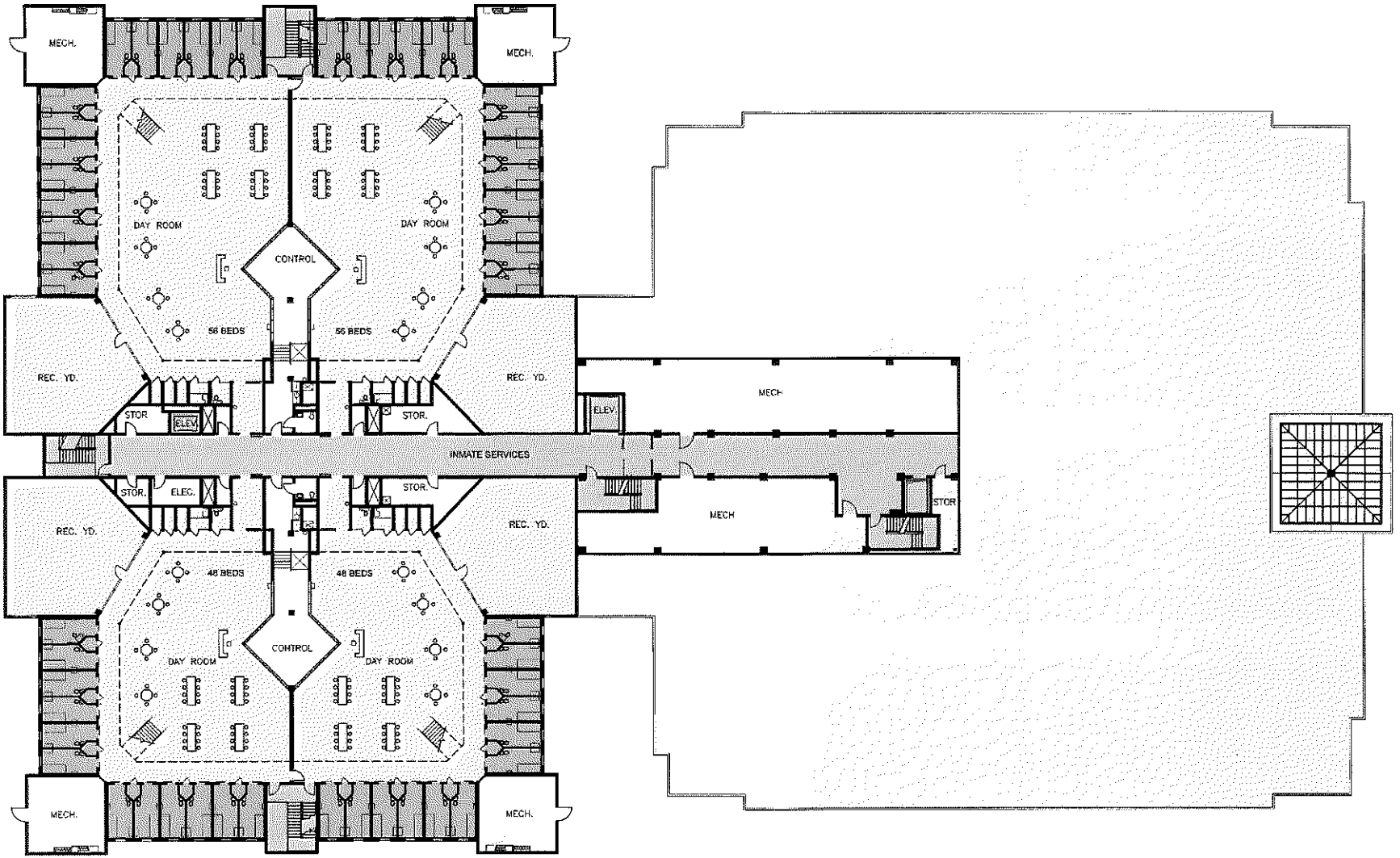
Stewart·Cooper·Newell·Architects
Planning Architecture Interiors
www.scn-architects.com




# EXISTING GASTON COUNTY SHERIFF'S OFFICE & JAIL

## SECOND FLOOR PLAN

Stewart·Cooper·Newell·Architects
Planning Architecture Interiors www.scn-architects.com




DETAINEE USE AREAS

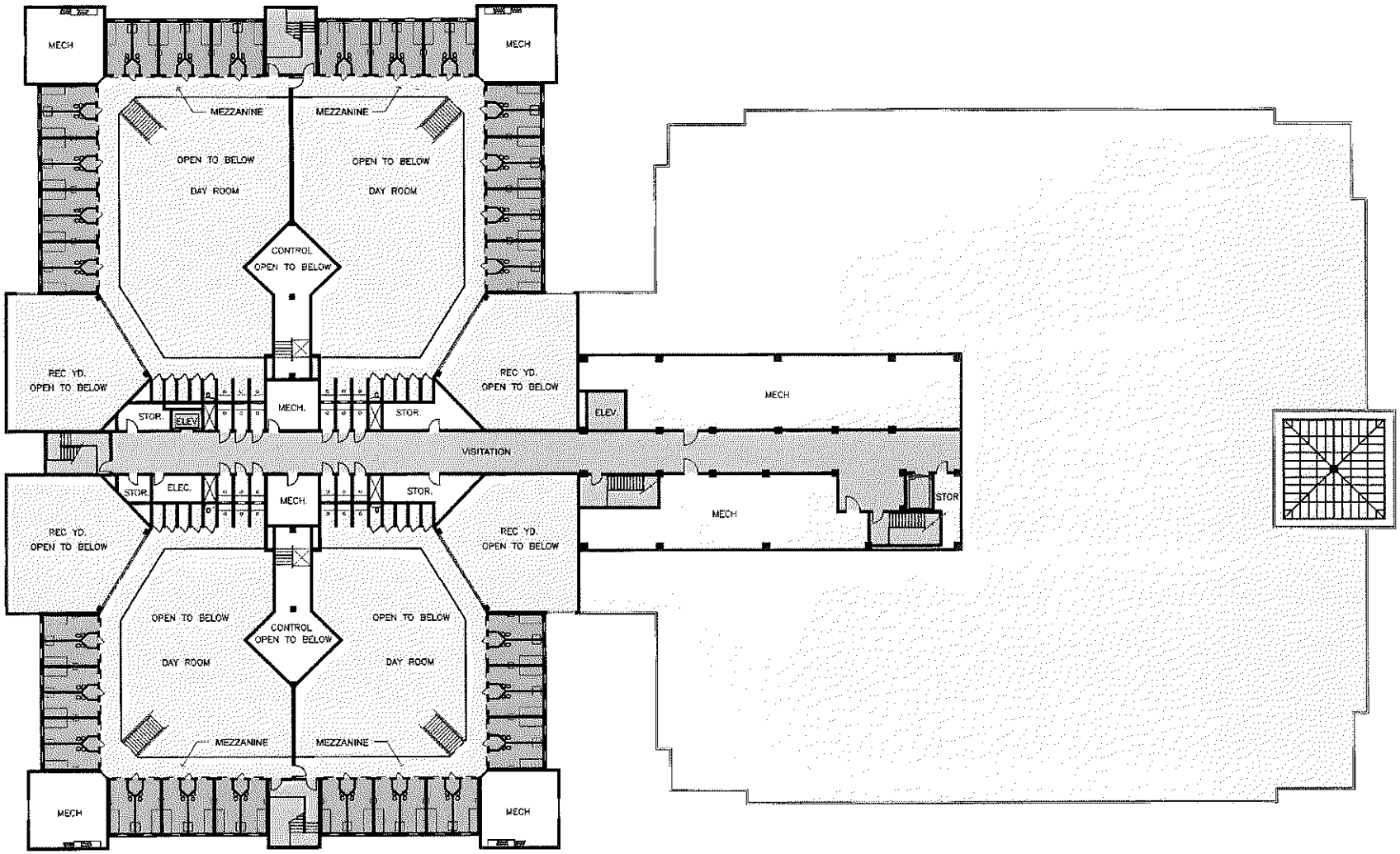
MIXED USE AREAS

SHERIFF USE AREAS

# EXISTING GASTON COUNTY SHERIFF'S OFFICE & JAIL

THRID FLOOR PLAN

Stewart·Cooper·Newell·Architects
Planning Architecture Interiors www.scn-architects.com




DETAINEE USE AREAS

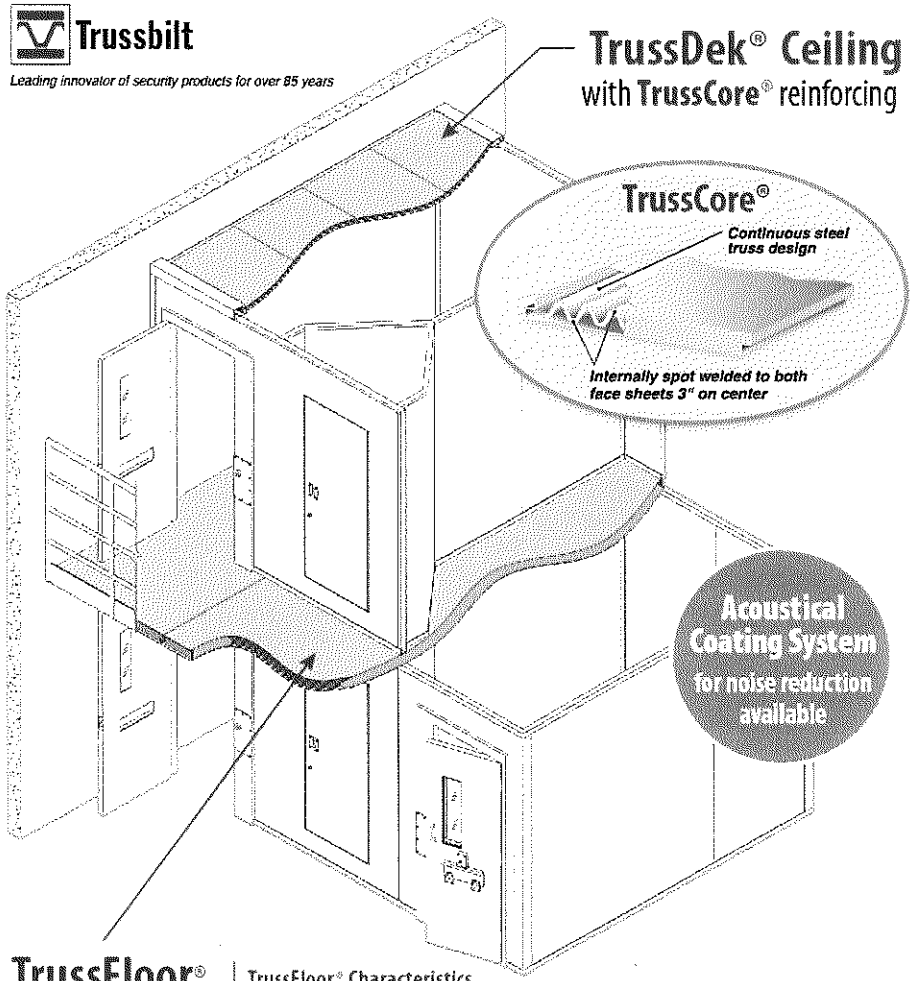
MIXED USE AREAS

SHERIFF USE AREAS

# EXISTING GASTON COUNTY SHERIFF'S OFFICE & JAIL

## FOURTH FLOOR PLAN

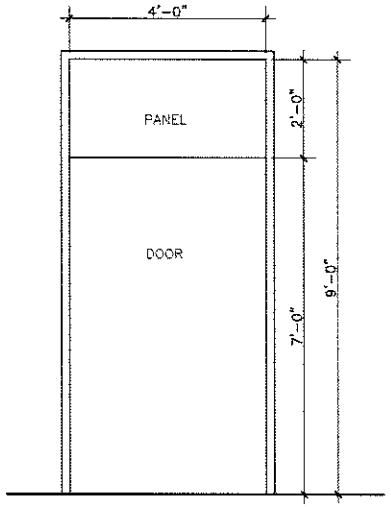
Stewart·Cooper·Newell·Architects
Planning Architecture Interiors
www.scn-architects.com




TrussFloor® Characteristics

- 12 gauge galvannealed detention grade steel with TrussCore® steel reinforcing
- Dimensions: 2" thick, up to 4-1/2' wide and 12' long
- Weight: less than 12#/sq. ft.
- Deflection: <L/360 at 12' length (40 psf load)

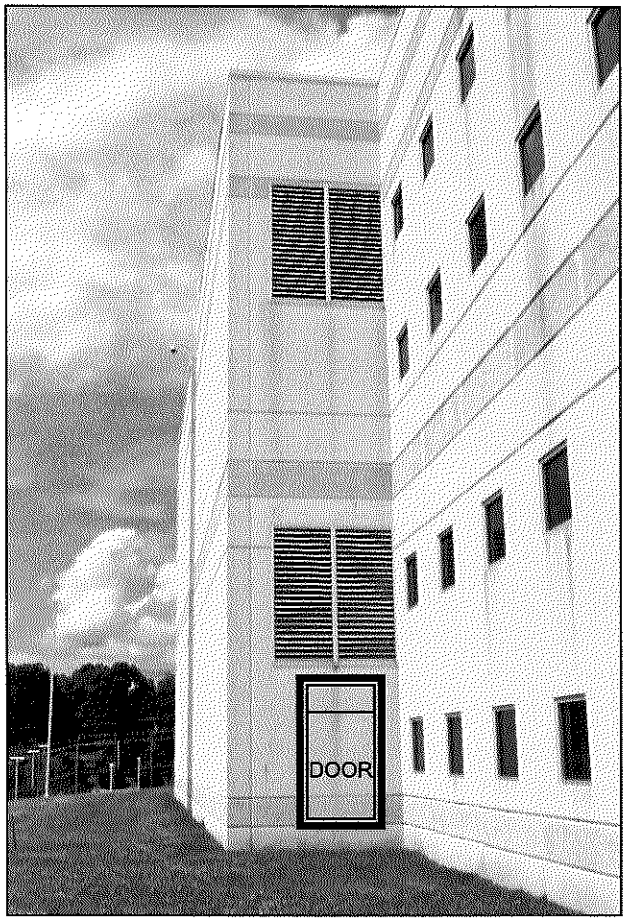
# 3 –New Cell Installation

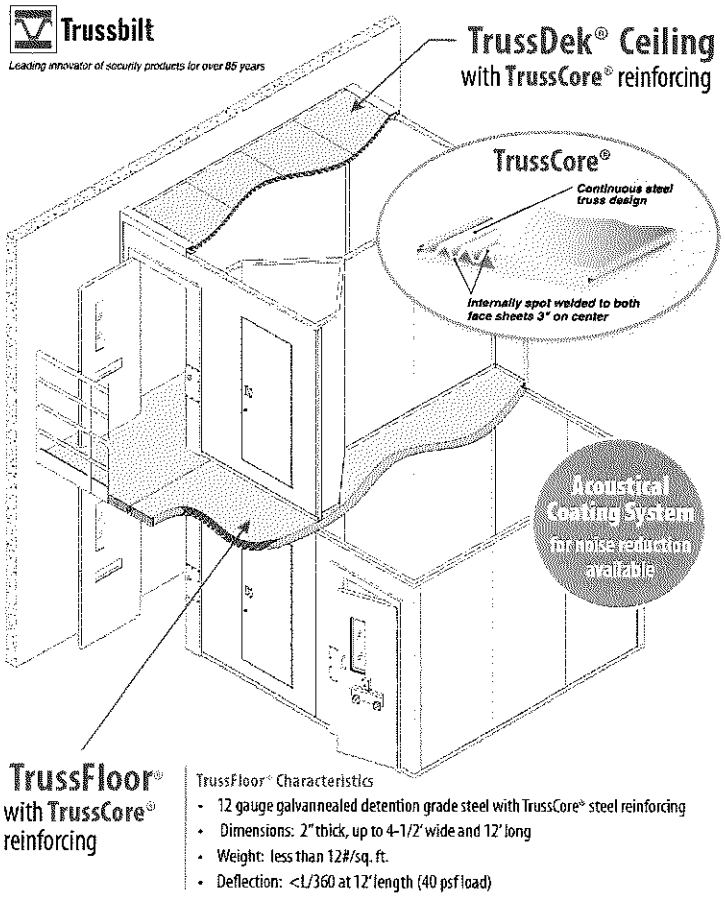



ALL STAINLESS STEEL

4 DOORS
4 FRAMES

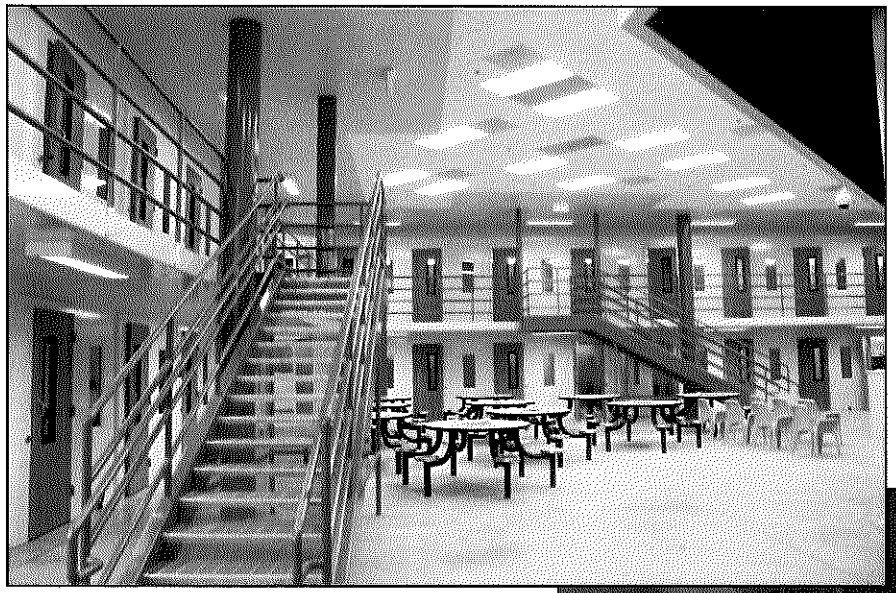
1 DOOR/FRAME ELEVATION
SCALE: 1/2" = 1'-0"

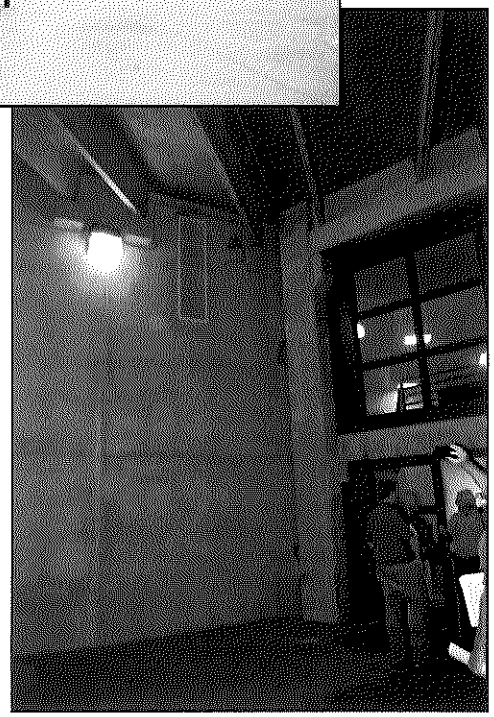



TrussFloor® Characteristics

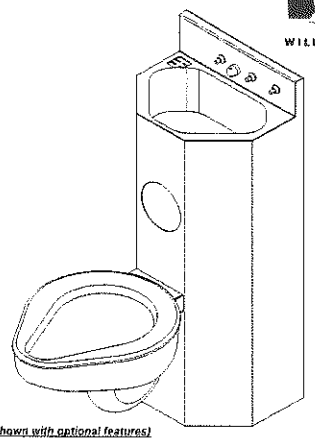
- 12 gauge galvannealed detention grade steel with TrussCore® steel reinforcing
- Dimensions: 2" thick, up to 4-1/2' wide and 12' long
- Weight: less than 12#/sq. ft.
- Deflection: <L/360 at 12' length (40 psf load)





# Willoughby Industries - *Security Products*

## 1546 Series
## 15" Wide
## Combination Units



*(Unit may be shown with optional features)*

**To specify fixture and accessories, use the Model Number and Options page.**

Example: To specify a wall outlet 15" combination unit with centered toilet, on rear, stainless penal filler bubbler, 1.6 GPF, dual temp., pneumatic metering valve, standard push buttons, lav. elbow waste, lav. fast drain, toilet waste extension, 3" PVC waste coupling, hydraulic flush valve, flush valve connection, center recessed tissue holder, and wall sleeve.

Use the following Willoughby Model Number:
**ECW-1546-C-ON-BP-1.6-PML2-PPB-EB-TWE-TWC3P-FV-FVT-RTHC-WS**

## Recommended Specifications

15" combination lavatory/toilet shall be:
Willoughby Model No. **EC__-1546**
(Select from model number and options list on next page)

Fixture shall be fabricated from 14 gauge, type 304 stainless steel. The construction shall be all welded, with exposed stainless surfaces polished to a #4 satin finish.

Standard toilet shall include:
- Elongated toilet bowl with contoured seat
- Integral crevice-free self-draining flushing rim with positive afterfill
- Fully enclosed 2-1/2" O.D. trap which shall maintain a minimum 2" seal and pass a 2-1/8" ball
- Bead blast finish bowl interior

Toilet shall be blowout type, requiring 35 psi min. flushing pressure. Model shall meet the requirements of ASME A112.19.3/CSA B45.4.

Standard lavatory shall include:
- Multi-sided bowl, 12-3/4" x 8-1/4" x 5" deep
- Stainless steel bubbler/filler
- Fast drain with air vent
- Elbow waste (1-1/2" F.I.P.)
- Self-draining soap dish

Fixture shall withstand loadings of 5,000 lbs. without permanent damage.

Cabinet interior shall be sound deadened with fire-resistant material.

Anchoring shall be by standard 4-point system. Ø1/2" threaded rods, nuts and washers shall be furnished for walls up to 8" thick. Unit shall require chase area for installation and maintenance.

***On back to back fixture installations, do not use standard cross type waste fitting: cross flow may result due to blowout jet action. Use sanitary or offset type waste fittings.***

**Note:** For HET 1.28 GPF, unit will pass a 2" ball.

*visit our website at www.willoughby-ind.com*
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.



S1-3

## MODEL NUMBER AND OPTIONS:

**1.) Toilet Waste Location:**
- ECW Wall Outlet
- ECF Floor Outlet

**2.) Base Model Number:**
- 1546 15" Lav-toilet Combination

**3.) Toilet Orientation:**
- L Angled Left
- R Angled Right
- C Centered

**4.) Fixture Mounting:**
- OF On-Floor (ECW Only)
- ON On-Floor

**5.) Bubbler Selection:**
- BP Penal Bubbler/Filler (Standard)
- BC Code Bubbler/Filler (w/ Mouth Guard)
- BPH Ligature-resistant Bubbler/Filler
- FL Penal Lav. Filler
- FLH Ligature-resistant Lav. Filler

**6.) Flush Valve GPF (Must Specify):**
- 1.28 GPF HET
- 1.6 GPF ULF (Standard)
- 3.5 GPF (3" waste tube required)

**7.) Lavatory Valve Selection:**
- NV No Valve
- PSL1 Single Temp. Pneumatic Non-metering
- PSL2 Dual Temp. Pneumatic Non-metering
- PML1 Single Temp. Pneumatic Metering
- PML2 Dual Temp. Pneumatic Metering
- E1L1 Single Temp. Electronic (Pick Control)
- E1L2 Dual Temp. Electronic (Pick Control)

***Valve Manifold Options:***
*Pneumatic or Electronic Only:*
- MA2 MA3 MA4

**8.) Lavatory Push Button Selection:**
- PPB Pneumatic Push Buttons
- PBH Ligature-resistant Push Buttons
- EPB Electronic Push Buttons
- EPBH Ligature-resistant Electronic Push Buttons
- P2PB Piezo Electronic Push Buttons

**9.) Electronic Controls*:**
**(Must Use Electronic Lavatory & Flush Valves):**
- WUCC-3010 ❑Pneumatic ❑WMSII

**10.) Lavatory Waste:**
- EB Elbow Waste (1-1/2" F.I.P.) (Standard)
- PT Integral "P"-Trap (1-1/2" F.I.P.)
- LWE Lavatory Waste Extension
- OV Lavatory Overflow
- CW1 Combined Waste w/o Clean-out
- CW2 Combined Waste w. Clean-out
- LW1 Thru-Wall Extension, "P"-Trap
- LW2 Thru-Wall Extension & Clean-out
- SLOW Slow Drain

**11.) Toilet Waste:**
- GWC Gasketed Waste Connector (Standard on ECF)
- TWE Toilet Waste Extension (Standard on ECW)
- TW3 3" Clean-out for (TWE)
- TW4 Floor Outlet Waste Connection
- TW5 4" Clean-out for (TWE)
- PC3 Pinned Clean-out Plug PVC-3"
- PCB3 Pinned Clean-out Plug Brass-3"
- PC4 Pinned Clean-out Plug PVC-4"
- PCB4 Pinned Clean-out Plug Brass-4"
- WO3 3" Toilet "P"-Trap (3.5 GPF Only)
- COH4 4" Clean-out Hook, 4" PVC Plug

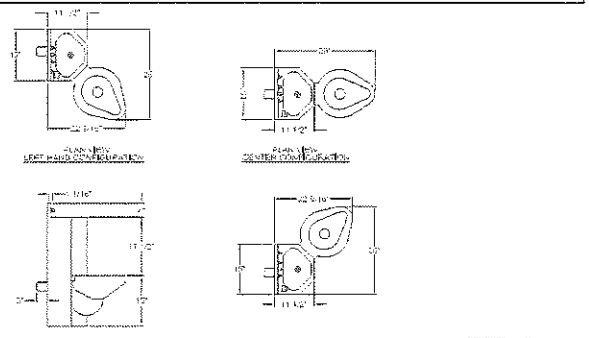
*(Req. 110v power through ground fault interrupter (GFCI) receptacle)

**12.) Waste Coupling for (TWE) Toilet Waste Extension:**
- TWC3P Connecting to 3" PVC
- TWC3C Connecting to 3" Cast Iron
- TWC4P Connecting to 4" PVC
- TWC4C Connecting to 4" Cast Iron

**13.) Other Options:**
- T4 Manual Reset Toilet Overflow Preventer, Req. (FV)
- T4A Auto Reset Toilet Overflow Preventer, Req. (FV)
- ET4 Electronic Toilet Overflow Preventer, Req. (EPV)
- FV Hydraulic Flush Valve (Includes Push Button)
- EPV Electronic Flush Valve (Pick Control)
- EFVP Electronic Flush Valve w/ (P2PB) (Pick Control)
- TFE Toilet Flush Extension
- FVT Flush Valve Connection
- HS Hinged White Plastic Seat (Not recommended for Max. Security/Ligature-resistant use; No Cover)
- RTH__Recessed Tissue Holder ❑ L ❑ LF ❑ C ❑ RF ❑ R
- ISH Integral Shelf
- TB1__Single Toothbrush Holder ❑ L ❑ R
- TB2__Dual Toothbrush Holder ❑ L ❑ R
- TH1__Single Towel Hook ❑ L ❑ LF ❑ C ❑ RF ❑ R
- TH2__Dual Towel Hook ❑ L ❑ LF ❑ C ❑ RF ❑ R
- DC Decorator Color (Fixture exterior only - White)
- TF24H Hard-wired Transformer, 110VAC to 24VAC*
- TF24P Plug-in Transformer, 110VAC to 24VAC*
- HPS High Polish Seat
- VG Vent Grille 6-1/2"x 9-1/2" (13-3/4 in² free area) ❑ L ❑ LF ❑ RF ❑ R
- MT Wall Template
- WS Wall Sleeve (Requires Accessible Chase)
- SK Ligature-resistant Toilet Skirt, (ON) On-Floor Only
- TG 12 Gauge Cabinet
- TSC Toilet Shipping Cover
- Other _____
- Other _____

Approved For Manufacturing By:_____ Date:_____ Company:_____
Wall Thickness:_____ Wall Type:_____

VERIFY ALL DIMENSIONS WITH FACTORY PRIOR TO ROUGH-IN
WILLOUGHBY RESERVES THE RIGHT TO MAKE CHANGES IN DESIGN AND DIMENSIONS WITHOUT FORMAL NOTICE AND WITHOUT INCURRING OBLIGATION



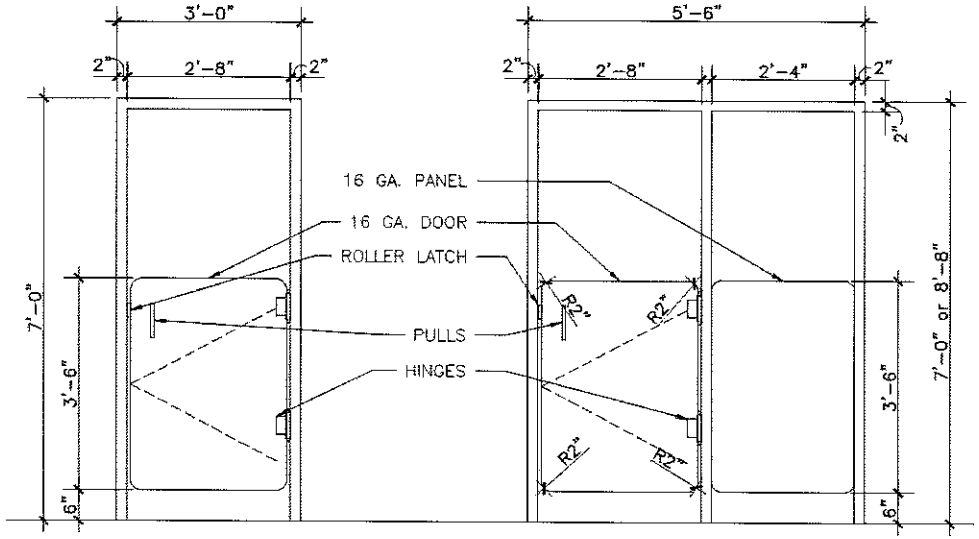
*visit our website at www.willoughby-ind.com*
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.

S1-4

© Rev. 7/2017

NEW TOILET DOORS

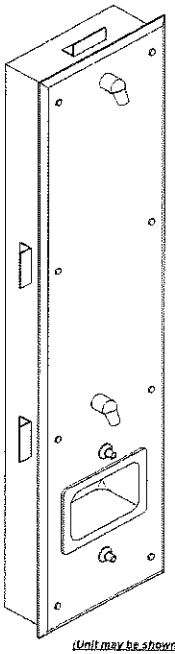



SHOWER DOOR
H.M. FRAME/DOOR EDGES
WELD-GRIND SMOOTH
ALL STAINLESS STEEL

# 5 – Possible Shower Changes

## Willoughby Industries - *Security Products*

# WRS-BF-FA-2HD Series
# Front Mounted
# Recessed Handicap
# Shower Panel
# w/(2) Fixed Shower Heads



*(Unit may be shown with optional features)*

IN COMPLIANCE WITH A.D.A. 2010

### Recommended Specifications

Front Mounted, Recessed Handicap Shower Panel w/(2) Fixed Shower Heads shall be:
Willoughby Model No. **WRS-BF-FA-2HD**
(Select from model number and options list on next page)

Shower panel shall be fabricated from 14 gauge, Type 304 stainless steel with exposed stainless surfaces polished to a #4 satin finish. Mounting frame shall be fabricated from 18 gauge galvanized steel.

Standard equipment shall include:
- Shower valve (Select from Valve Selection options list)
- (2) (NPS) non-adjustable penal shower heads

Shower panel shall attach to mounting frame with security screws. Unit requires no chase area for installation and maintenance.

**To specify fixture and accessories, use the Model Number and Options page.**

Example: To specify a Front Mounted, Recessed Handicap Shower Panel w/(2) Fixed Shower Heads with single temp. pneumatic metering valves (manifolded), standard pneumatic push buttons, standard 2.5 GPM flow rate, standard (NPS) shower heads, in-line thermostatic mixing valve, and recessed mounted soap dish:

Use the following Willoughby Model Number:
**WRS-BF-FA-2HD-PML1-MA2-PPB-2.5GPM-NPS-TMV-RD**

*visit our website at www.willoughby-ind.com*
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.





## MODEL NUMBER AND OPTIONS:

**1.) Base Model Number:**
☐ WRS-BF-FA-2HD — Front Mounted, Recessed Handicap Shower Panel w/(2) Fixed Shower Heads

**2.) Valve Selection:**
☐ NV — No Valve
☐ PML1 — Single Temp. Pneumatic Metering
☐ PML2 — Dual Temp. Pneumatic Metering
☐ E1L1 — Single Temp. Electronic (Pick Control)*
☐ E1L2 — Dual Temp. Electronic (Pick Control)*

***Valve Manifold Option:***
*Pneumatic or Electronic Valves Only:*
***(See the Manifold Option Page at the end of Catalog Section S5 for further information)***
☐ MA2

**3.) Push Button Selection:**
*Pneumatic or Electronic Valves Only:*
☐ PPB — Pneumatic Push Buttons
☐ EPB — Electronic Push Buttons*
☐ PZPB — Piezo Push Buttons*

**4.) Flow Rates:**
☐ 2.5 GPM (Standard)
☐ 2.0 GPM
☐ 1.5 GPM

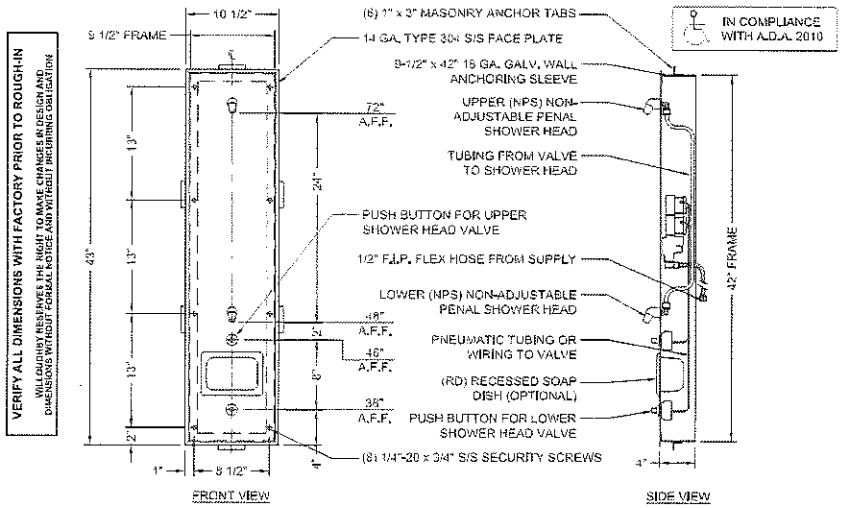
**5.) Electronic Controls* (Must Use Electronic Push Button):**
☐ WUSC-2200 ☐ WUSC-2400 ☐ Pneumatic ☐ WMS II

**6.) Shower Head Selection:**
☐ NPS — Non-adjustable Penal Shower Heads (Standard)
☐ APS — Adjustable Penal Shower Heads

**7.) Options:**
☐ TMV — In-line Thermostatic Mixing Valve
☐ TF24H — Hard-wired Transformer, 110VAC to 24VAC*
☐ TF24P — Plug-in Transformer, 110VAC to 24VAC*
☐ RD — Recessed Mounted Soap Dish
☐ SD — Surface Mounted Soap Dish
☐ Other _____
☐ Other _____

*(Req. 110V power through ground fault interrupter (GFCI) receptacle)

Approved For Manufacturing By:_____ Date:_____ Company:_____
Wall Thickness:_____ Wall Type:_____



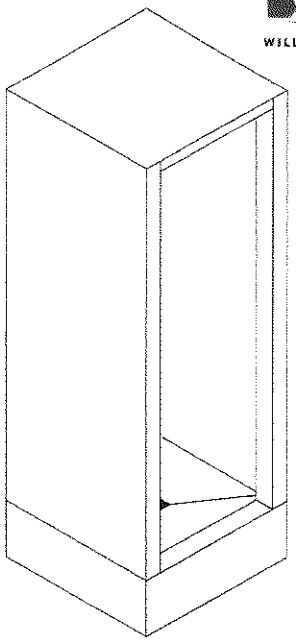

*visit our website at www.willoughby-ind.com*
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.

# Willoughby Industries - *Security Products*

WILLOUGHBY

## Cabinet Shower



***Please provide shower finish schedule upon ordering.***

***(Unit may be shown with optional features)***

**To specify fixture and accessories, use the Model Number and Options page.**

Example: To specify a unitized 36" x 36" Cabinet Shower with left hand shower head, back chase/ valving, polished front, single temp. pneumatic metering valve, standard pneumatic push button, 2.5 GPM flow rate, stainless non-adjustable penal shower head, stainless elbow waste drain and recessed mounted soap dish

Use the following Willoughby Model Number:
**US-3636-L-BCS-A4-PML1-PPB-2.5GPM-NPS-ESD-RD**

***To specify Knockdown Cabinet Shower:*** Select the "KS" model number from the list on the Model Number and Options page.

### Recommended Specifications

Cabinet Shower shall be:
Willoughby Model No. ___S-_____
(Select from model number and options list on next page)

Shower cabinet shall be fabricated from 14 gauge, Type 304 stainless steel. Shower floor shall be fabricated from 11 gauge, Type 304 stainless steel. The construction shall be ***all welded*** (unitized models only, not applicable to knockdown models), exposed stainless surfaces polished to a #4 satin finish, except shower floor which shall have a non-slip glass blast finish.

Standard equipment shall include:
- (NPS) non-adjustable penal shower head, mounted in front corner panel (plumbed through the side mullion, under shower floor, and to chase wall)
- (EBD) integral strainer drain with elbow waste (2" F.I.P.) extending to chase wall

Unit requires chase area for installation and maintenance.

Underside of shower floor shall be sound deadened with fire resistant material.

***visit our website at www.willoughby-ind.com***
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.





## MODEL NUMBER AND OPTIONS:

**1.) Base Model Number:**

*Unitized Cabinet Showers:*
- ☐ US-3030 30"L x 30"W Cabinet Shower
- ☐ US-3232 32"L x 32"W Cabinet Shower
- ☐ US-3636 36"L x 36"W Cabinet Shower

*Knockdown Cabinet Showers:*
- ☐ KS-3030 30"L x 30"W Cabinet Shower
- ☐ KS-3232 32"L x 32"W Cabinet Shower
- ☐ KS-3636 36"L x 36"W Cabinet Shower

**2.) Shower Head Orientation:**
- ☐ L Left Hand
- ☐ R Right Hand

**3.) Chase Wall/Valve Orientation:**
- ☐ BCS Back Chase
- ☐ LCS Left Chase
- ☐ RCS Right Chase

**4.) Cabinet Side Exterior Finish Schedule:**
***(Based on Chase Wall Orientation; see the Options Pages at the end of Catalog Section for diagram)***

*For (BCS) Back Chase:*
- ☐ A1 Polished Front, Left Side, & Right Side
- ☐ A2 Polished Front & Right Side
- ☐ A3 Polished Front & Left Side
- ☐ A4 Polished Front only

*For (LCS) Left Chase:*
- ☐ B1 Polished Front, Back Side, & Right Side
- ☐ B2 Polished Front & Right Side
- ☐ B3 Polished Front only

*For (RCS) Right Chase:*
- ☐ C1 Polished Front, Back Side, & Left Side
- ☐ C2 Polished Front & Left Side
- ☐ C3 Polished Front only

**5.) Valve Selection:**
- ☐ NV No Valve
- ☐ PML1 Single Temp. Pneumatic Metering
- ☐ PML2 Dual Temp. Pneumatic Metering
- ☐ E1L1 Single Temp. Electronic (Pick Control)*
- ☐ E1L2 Dual Temp. Electronic (Pick Control)*
- ☐ PBV Pressure-Balancing Mixing Valve
- ☐ TPV Temp/Pressure-Balancing Mixing Valve
- ☐ TPLR Ligature-resistant Temp/Pressure-Balancing Mixing Valve

***Valve Manifold Option:***
*Pneumatic or Electronic Valves Only:*
***(See the Manifold Option Page at the end of Catalog Section S5 for further information)***
- ☐ MA2

**6.) Push Button Selection:**
*Pneumatic or Electronic Valves Only:*
- ☐ PPB Pneumatic Push Buttons
- ☐ PBH Ligature-resistant Push Buttons
- ☐ EPB Electronic Push Buttons*
- ☐ EPBH Ligature-resistant Electronic Push Buttons*
- ☐ PZPB Piezo Push Buttons*

**7.) Flow Rates:**
- ☐ 2.5 GPM (Standard)
- ☐ 2.0 GPM
- ☐ 1.5 GPM

**8.) Electronic Controls*:**
**(Must Use Electronic Push Button):**
- ☐ WUSC-2200 ☐ WUSC-2400
- ☐ Preutronic ☐ WMS II

**9.) Shower Head Selection:**
- ☐ NPS Non-adjustable Penal Shower Head (Standard)
- ☐ APS Adjustable Penal Shower Head
- ☐ CSH Ligature-resistant Shower Head

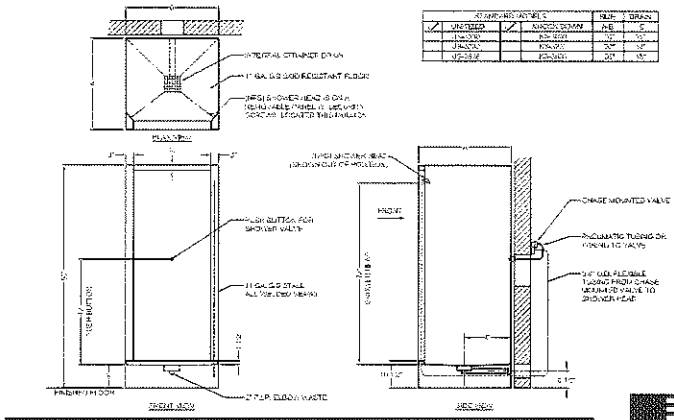
**10.) Drain Selection:**
- ☐ EBD Elbow waste for Cabinet Shower (2" FIP) (Standard)
- ☐ PTD Integral 'P'-Trap Cabinet Shower Drain (2" FIP)
- ☐ NHD No-hub Cabinet Shower Drain (2")
- ☐ ICD Inside Caulk Cabinet Shower Drain (2")

**11.) Options:**
- ☐ VG Ventilation Grille (Specify Free Area and Location; Standard Grille Dimensions: 8-3/4" x 8-3/4" with 15-3/4 $in^2$ open area)
- ☐ CP Closure Panels (Specify Dimensions and Locations)
- ☐ STC Sloping Top Closure
- ☐ MD__ Modesty Door (Not ADA-Compliant)
  - ☐ L Hinged Left
  - ☐ R Hinged Right
- ☐ CR Curtain Rod
- ☐ DR Drying Receptor
- ☐ TH1 Release Towel Hook
- ☐ RD Recessed Mounted Soap Dish
- ☐ SD Surface Mounted Soap Dish
- ☐ ZC "Z"-Clip Floor Mounting
- ☐ TMV In-line Thermostatic Mixing Valve
- ☐ TF24H Hard-wired Transformer, 110VAC to 24VAC*
- ☐ TF24P Plug-in Transformer, 110VAC to 24VAC*
- ☐ Other _____
- ☐ Other _____

*(Req. 110V power through ground fault interrupter (GFCI) receptacle)

Approved For Manufacturing By:_____ Date: _____ Company: _____
Wall Thickness: _____ Wall Type: _____

VERIFY ALL DIMENSIONS WITH FACTORY PRIOR TO ROUGH-IN
WILLOUGHBY RESERVES THE RIGHT TO MAKE CHANGES IN DESIGN AND DIMENSIONS WITHOUT FORMAL NOTICE AND WITHOUT INCURRING OBLIGATION.

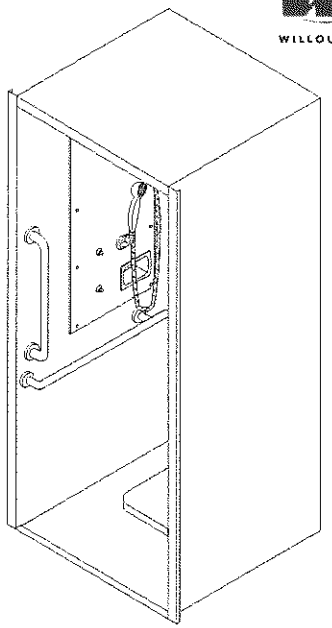


***visit our website at www.willoughby-ind.com***
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.

# Willoughby Industries - *Security Products*

## Front Access Handicap Cabinet Shower



IN COMPLIANCE WITH A.D.A. 2010

### Recommended Specifications

Front Access Handicap Cabinet Shower shall be:
Willoughby Model No.___**S- 3636-HC-FA**
(Select from model number and options list on next page)

Shower cabinet shall be fabricated from 14 gauge, Type 304 stainless steel. Shower floor shall be fabricated from 11 gauge, Type 304 stainless steel. The construction shall be ***all-welded*** (unitized models only, not applicable to knockdown models),exposed stainless surfaces polished to a #4 satin finish, except shower floor which shall have a non-slip glass blast finish.

Standard equipment shall include:
- (ICD) Inside caulk drain (2") with removable strainer
- (GB3318) 18" x 33" Horizontally-mounted L-shaped grab bar
- (GB24V) 24" Vertically-mounted grab bar
- (FSS) Fold-up stainless steel shower seat

Unit requires no chase area for installation and maintenance. Shower valve and shower head shall be mounted on removable access panel secured with security screws.

Underside of shower floor shall be sound deadened with fire resistant material.

***Please provide shower finish schedule upon ordering.***
***(Unit may be shown with optional features)***

**To specify fixture and accessories, use the Model Number and Options page.**

Example: To specify a unitized 36" x 36" Front Access Handicap Cabinet Shower with left hand shower head push button/valving, polished front, single temp. pneumatic metering valves, standard pneumatic push buttons, 2.5 GPM flow rate, non-adjustable pencil shower head and hand held flex shower, stainless inside caulk drain, and recessed mounted soap dish

Use the following Willoughby Model Number:
**US-3636-HC-FA-L-B3-PML1-MA2-PPB-2.5GPM-NPS-FX-ICD-RD**

**Unit requires 2" recess in floor.**

Fixture shall be free-standing, no anchoring required.

***To specify Knockdown Cabinet Shower:*** Select the "KS" model number from the list on the Model Number and Options page.

***visit our website at www.willoughby-ind.com***
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.





## MODEL NUMBER AND OPTIONS:

**1.) Base Model Number:**
*Unitized Handicap Front Access Cabinet Shower:*
☐ US-3636-HC-FA 36"L x 36"W Cabinet Shower
*Knockdown Handicap Front Access Cabinet Shower:*
☐ KS-3636-HC-FA 36"L x 36"W Cabinet Shower

**2.) Shower Head/Push Button/Valve Orientation:**
☐ L Left Hand
☐ R Right Hand

**3.) Cabinet Side Exterior Finish Schedule:**
***(Based on Chase Wall Orientation; see the Options Pages at the end of Catalog Section for diagram))***
*For (LCS) Left Wall:*
☐ B2 Polished Front & Right Side
☐ B3 Polished Front only
*For (RCS) Right Wall:*
☐ C2 Polished Front & Left Side
☐ C3 Polished Front only

**4.) Valve Selection:**
☐ NV No Valve
☐ PML1 Single Temp. Pneumatic Metering
☐ PML2 Dual Temp. Pneumatic Metering
☐ E1L1 Single Temp. Electronic (Pick Control)*
☐ E1L2 Dual Temp. Electronic (Pick Control)*
☐ PBV Pressure-Balancing Mixing Valve
☐ TPV Temp/Pressure-Balancing Mixing Valve
☐ TPLR Ligature-resistant Temp/Pressure-Balancing Mixing Valve

***Valve Manifold Option:***
*Pneumatic or Electronic Valves Only:*
***(See the Manifold Option Page at the end of Catalog Section S5 for further information)***
☐ MA2

**5.) Diverter Valve:**
☐ DV Diverter Valve
☐ DVLR Ligature-resistant Diverter Valve
☐ PML144A2 Two Single Temp. Pneumatic Metering Valves in Lieu of Diverter Valve

**6.) Push Button Selection:**
*Pneumatic or Electronic Valves Only:*
☐ PPB Pneumatic Push Buttons
☐ PBH Ligature-resistant Push Buttons
☐ EPB Electronic Push Buttons*
☐ EPBH Ligature-resistant Electronic Push Buttons*
☐ PZPB Piezo Push Buttons*

**7.) Flow Rates:**
☐ 2.5 GPM (Standard)
☐ 2.0 GPM
☐ 1.5 GPM

**8.) Electronic Controls:***
**(Must Use Electronic Push Button):**
☐ WUSC-2200 ☐ WUSC-2400
☐ Proximity ☐ WMS II

**9.) Shower Head Selection:**
☐ NPS Non-adjustable Pencil Shower Head
☐ FX Hand Held Flexshower w/ Quick Disconnect and Vacuum Breaker
☐ APS Adjustable Pencil Shower Head
☐ CSH Ligature-resistant Shower Head
☐ 2HD (2) Fixed Shower Heads, Replaces (FX)

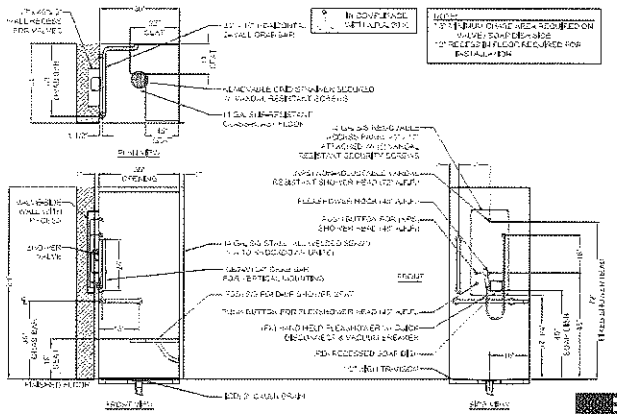
**10.) Drain Selection:**
☐ ICD Inside Caulk Cabinet Shower Drain (2") (Standard)

**11.) Options:**
☐ VG Ventilation Grille (Specify Free Area and Location; Standard Grille Dimensions: 8-3/4" x 8-3/4" with 15-3/4 in² open area)
☐ CP Closure Panels (Specify Dimensions and Locations)
☐ STC Sloping Top Closure
☐ MD___ Modesty Door (Not ADA-Compliant)
☐ L Hinged Left
☐ R Hinged Right
☐ CR Curtain Rod
☐ TH1 Release Towel Hook
☐ GBC Grab Bar Closure Plate
☐ RD Recessed Mounted Soap Dish (Standard)
☐ SD Surface Mounted Soap Dish
☐ TA Threshold Anchors
☐ TMV In-line Thermostatic Mixing Valve
☐ TF24H Hard-wired Transformer, 110VAC to 24VAC*
☐ TF24P Plug-in Transformer, 110VAC to 24VAC*
☐ LFSS Lead Fold-up Stainless Steel Shower Seat
☐ LGB3318 Lead 18" x 33" Horizontally-mounted L-Shaped Grab Bar
☐ LGB24V Lead 24" Vertically-mounted Grab Bar
☐ Other _____
☐ Other _____

*(Req. 110V power through ground fault interrupter (GFCI) receptacle)

Approved For Manufacturing By:_____ Date:_____ Company:_____
Wall Thickness:_____ Wall Type:_____

VERIFY ALL DIMENSIONS WITH FACTORY PRIOR TO ROUGH-IN
WILLOUGHBY RESERVES THE RIGHT TO MAKE CHANGES IN DESIGN AND DIMENSIONS WITHOUT FORMAL NOTICE AND WITHOUT INCURRING OBLIGATION



***visit our website at www.willoughby-ind.com***
5105 West 78th Street • Indianapolis, IN. 46268
(317) 875-0830 • Fax: (317) 875-0837 • (800) 428-4065

MADE IN THE U.S.A.

# 6 – Jail Floor Plans
# Phase I, II & III