Field Services Unlimited

Surveyor Scope of Work

Humana Conviva 3D - HC3D

INTRODUCTION

Objectives

This survey's purpose is to gather all necessary information to assist with the design of new stores, remodel existing ones, or expand/combine spaces. FSU will serve as the client's eyes and ears on site. Be on the lookout for any anomalies(Furniture, equipment, or tight spaces may block the scanner, leaving holes in the point cloud. Reflective surfaces (glass, polished metal) often generate spurious points or "spray" artifacts.), as lengthy redlines for a 3D model or revisiting a site creates a heavy expense.

FSU builds a Revit model using point cloud data, photographs, and survey notes. All site types require a scanned survey, and each has a specific Revit model Scope of Work (SOW) based on the type of remodel or facility use.

Humana facilities are in the healthcare sector and generally fall into two main categories:

- Healthcare Facilities: Exam rooms, waiting areas, reception, and administrative offices.
- Office Suites: General office spaces, conference rooms, and lobbies.

Confidentiality

Client information must be kept strictly confidential. When discussing the project with existing employees or site contacts, refer to it as an "insurance survey."

Site Regularity

Each site is unique and may have special requirements. This document is meant to be a general guideline for surveying. In general the PM will communicate with the site contact to get an "extent of survey" document. This can be anything from a CAD plan to a PDF or photos of the space. Ensure that the survey area encompasses all of this scope +20' of the surrounding area. This includes various areas that may need additional access while on site like adjacent rooms or other tenants.

Acceptance and Responsibilities:

By accepting this assignment and conducting the survey, you agree to the scope of work, deliverable requirements, delivery timeline, survey fee, and any other details provided below or by office staff. If the required information is not collected according to the scope, you may be required to revisit the site.

Quality and Professionalism:

Our Customer Service Standard is to exceed client expectations with a high level of professionalism. Surveys should be customized to meet the specific needs of each client and performed with care and pride. FSU utilizes strict protocols and review procedures to ensure the quality of its surveys. All FSU contractors are responsible for guaranteeing the quality of their work while adhering to FSU standards.

PROJECT OPERATIONS

Payment & Reimbursables

Payment Terms:

- Pay when Paid: FSU pays its vendors after receiving payment from its clients.
- Surveyors should submit invoices for the survey fee only via the vendor bill portal in Quickbase.
- The survey fee is defined in Quickbase.
- Payment terms vary depending on the client.
- Clients are invoiced after FSU reviews and fully delivers all survey components and deliverables.
    - The vendor payment timeline starts once FSU submits the project invoice to the client, not when independent contractors submit their invoices to FSU.
    - It takes approximately 7 business days for FSU staff to process survey deliverables from the field.

- FSU will pay vendor invoices within 5 business days of receiving client payment.

Reimbursable Travel Expenses

- Travel expenses must be submitted and processed per the FSU Vendor Expense Report Policy.

Deliverable Turnaround/Upload Timeframe

- Deliverables must be uploaded within 24 hours of survey completion.

Attire

- Collared shirt and full-length khaki pants preferred (no shorts).
- Safety vest, especially when working on the exterior of a site where there is vehicle traffic.
- FSU Badge/ID.

Prep Time

Touch Base with Site Contact: This can be via email or a phone call: 10 min
Charge Batteries: 5 min
Review Scope of Work: This includes scope or work and extents documents in Dropbox, site contact responses in Quickbase, and Quickbase notes: 30 min
Kick off call: 30 min
Check for Fastfields dispatch: 5 min
Book Travel: 1 hr
Total Estimated Time:
±2.5 hr (based on the tasks provided, subject to adjustment)

Site Time

Site time will vary depending on the site extents, site access hours, and scope of work. Generally speaking, **Humana** sites can be completed in one to one and a half days. When reviewing the scope of work, let the project manager know if you will need more than a day on site. If there are unexpected delays on site and an extension is needed to complete the survey, please contact the **project manager** immediately so they can communicate the change to **Humana** and the site contact.
Surveyors classified as hourly employees must take a daily, unpaid lunch break (typically 30 minutes) per the FSU Employee Handbook. Schedule your break away from active scanning tasks, log your break start and end times in Quickbase, and confirm you've returned on time before resuming field work. This uninterrupted rest period helps maintain safety, accuracy, and compliance with labor regulations.

Closeout Tracking of Time

360 Photos: Renumber & Photo Map: 30 min
Matterport: Time: 5 min (95% done on site)
Registration: Time: 1 hr (60 min; field 360 handles most registration, quick verification and export)
Still Photos: Renumber & Photo Map: 45 min
Upload Time: 15 min (to upload and organize files for S3/Dropbox)
Total Estimated Time:
±3 hr (based on the tasks provided, subject to adjustment)

Travel Rules

Travel & Expense Policy Summary

FSU reimburses reasonable business travel expenses for internal surveyors and employees. All travel costs (flights, lodging, transportation) must be pre-approved via the Teams Travel Channel, and receipts must be submitted in JPG or PDF format. **Please see the employee handbook (or for contractors, the travel policy document) for full details. *Please see here for GSA Links.***

- Airfare: Book economy class flights at the lowest available fare, including Southwest. One checked bag is reimbursed. Leica Scanners must be carried on.
- Lodging: Stay within GSA per diem rates. Airbnb/VRBO is allowed if cost-effective with free cancellation. Additional nights require PM approval.

- Ground Transportation: Use the most economical option, including Uber/Lyft. Rental cars should be cost-effective, and fuel must be refilled before return. Personal car mileage is reimbursed at GSA rates.
- Parking & Tolls: Airport parking must be under $10/day when available. Site parking and tolls are reimbursable with receipts.
- Meals: Reimbursed per GSA per diem rates, with a max 20% tip. Itemized receipts are required.
- Non-Reimbursable Items: Includes in-flight purchases, excess baggage fees, childcare, pet boarding, toiletries, airline club memberships, and fines.
- Traveler safety is a priority. Employees must provide emergency contacts before trips. Following these guidelines ensures full and timely reimbursement.

FSU project contacts:

Scheduling & Site Access Escalation:

1. Project Coordinator
2. Project Manager
3. VP of Operations

Survey & Scope Questions Escalation:

1. Project Manager
2. Revit/BIM Specialist

Equipment Issues on Site Escalation:

1. Revit/BIM Specialist
2. Project Manager

Surveyor Communication Requirements:

- Notify FSU (Project Manager) when all deliverables have been uploaded.
- Respond to drafters and FSU staff phone calls within 6 hours, emails within 12 hours.

Surveyor Responsibilities:

1. Review the provided ‘Extent’ drawing document.
2. Address any questions with the project lead prior to the survey.
3. Coordinate feasible survey dates with FSU, then book travel.
4. Coordinate with the site contact prior to the survey for site visit timing and any requirements.
5. Contact the Project Lead with any on-site issues or concerns impacting client needs or project timeline.
6. Enter the ‘actual survey date’ in Quickbase.
7. Enter the ‘date surveyor deliverables in’ in Quickbase.
8. Record the amount of time the survey took and any items of note in the ‘survey update/site notes’ field in Quickbase.
9. Upload all documentation/deliverables to Quickbase on time and notify the project lead. Note: All deliverables must be completed in full prior to upload; partial deliverable uploads will not be accepted.
10. Complete a Water Test sample from an unfiltered source at the site and seal the kit into a package with the provided mailing label and paperwork.

Point-Cloud Scanning:

Scope Consistency:

The scope of work stays unchanged regardless of the technology or technique used for the survey. All scope items must be completed. If a scan does not capture any scope item, ensure proper documentation is completed. This may include photos, field drawings or written documentation.

Device Inventory:
Ensure the device package is complete and ‘checked out’ from Quickbase resource tracking. This is to ensure the proper scanner and its satellite accessories are all tracked and accounted for.

Data Review:
Review with the Revit team if all scans and/or projects are backed up to the drive and can be deleted from the device.

Communication:
Communicate any issues or delays that happen on site with the scanning devices to the Revit team.

Best Practices:
BLK2Go 3D Laser Scanning Best Practices
Tripod Based 3D Laser Scanning Best Practices

Data Processing:
Process the point-cloud scan file in Register360 and upload the RAF project file to S3 (for internal users) or a file-sharing service (for contractors).
When using non-Leica based point-cloud technology, the deliverable will be to provide a unified, undecimated point cloud along with the raw scan data. The unified point cloud should be decimated (1mm) and unified to remove any unnecessary points but still keep the important details intact. Always include the full set of raw scan data (organized by site and scan position and named according to the project’s naming convention) so that FSU can import the scans into Register360, run or rerun registration workflows, verify point-cloud quality, troubleshoot any alignment issues, and archive a complete backup for future reference.

Surveyor Deliverables

Extent of Survey Document Compliance
Always review the site notes for any special requirements before scanning.
Humana project sites fall into two main categories, each with its own specific scope of work and modeling requirements. All site types require a full 3D scanned survey using point cloud data, photographs, and survey notes. The resulting Revit model is tailored based on the type of remodel or facility use.
The first type is a **gut remodel**, often associated with retail spaces being converted into healthcare facilities. These are typically labeled as *"Conviva"* or *"PiPC"* in internal systems such as Quickbase or Teams. In these projects, the building will be fully gutted and rebuilt, so the survey should focus on capturing the architectural “bones” of the space. This includes the floors, structure, demising walls, roof, major mechanical and electrical control units, and plumbing fixtures such as toilets, sinks, and drains. Exterior context within 20 feet of the building—including sidewalks, utilities, and the first row of parking (it is also important to capture the **ADA spaces**). However, these sites do not require documentation of minor MEP systems, ceiling elements, or built-in furniture and cabinetry.
The second site type covers an **office remodel or minor expansion**, which typically involves existing healthcare or office suites that will undergo lighter renovations—mainly cosmetic updates such as new finishes and furniture. These are usually labeled as “*Workplace Solutions*” in project tracking tools. In these cases, the existing architecture will largely remain intact, and the survey must capture a more complete level of detail. This includes everything listed for gut remodels—floors, structure, demising walls, roof, major mechanical and electrical units, plumbing fixtures, and exterior context—but also extends to minor MEP systems, ceilings and ceiling elements, and all built-in furniture and cabinetry.

- Surveyors must submit a copy of the 'Extent of Survey' document with indications of completion for each required item.
- All areas within the identified survey area must be documented according to this scope of work and attached tables.

Point Cloud Scans
- Surveyors must ensure the scanner is adequately picking up all necessary information.

    - Review Quickbase for site-specific notes, scope updates, or client communications.
    - If anything is unclear or extents document is missing, contact the **Project Manager** before surveying.
- Scans must pick up the following (But not limited to, see client specific scope for exact requirements):
    - Include exterior/interior walls, partitions, partial-height walls, sills, doors, windows, storefronts, glazing, and mullions.
    - Built-in furniture, bump-outs, recesses, niches, overhangs, and steps or ramps indicating level changes.
    - Elevator shafts, escalators, stairs, and direction of roof slope.
    - Toilets, sinks, fountains, major drainage, water heaters, and large piping (>4").
    - Electrical panels, disconnect switches, thermostats, and outlets/data/switches along perimeter.
    - Structural Elements (True Placement)
    - Beams, columns, joists, and decks with accurate size, material, orientation, and location.
    - Structural elements, hard ducts, HVAC units, and large piping (>4").
    - **Roof Elements**: Access hatches, parapet walls, steps or level changes, roof vents, exhaust fans, RTUs, condensers, satellites, roof drains, HVAC units, and roof penetrations (drains, ducts, etc.).
    - Sidewalks (including grading), lighting, elevation/slope changes, canopies, identify different grass/gravel/non-concrete surfaces, and signage

Photos

- Photos cannot be taken at night unless the client requires an overnight survey. In those cases, we will try to capture photos closer to dawn or dusk. This allows us to use available lighting more effectively during overnight surveys. If shooting is only possible during the midnight hours, be prepared to use a long exposure camera on a tripod to maximize light capture.
- Provide a photo key organized by area.
- Include photos of all surveyed areas (interior, roof and exterior), architectural details, utility equipment, and all associated utility systems.
- Provide comprehensive above-ceiling photos and a roof photo array capturing all rooftop equipment.
    - When taking above ceiling photos using a 360 Camera. HDR Rendering may not be sufficient. In those cases, doing a manual long exposure may be the best practice.
    - Above grid ceiling photos are only needed if the scope specifically calls for it. **All Humana require roof photos**
- Photo Format:
    - Minimum size: 1920x1440
    - Minimum resolution: 200 dpi
    - Landscape format only.
- Photo Naming & Numbering: Use the format (SITE #)-(SITE-NAME)-photos_###, e.g., 10899_001-University-Student-Center-Photos_001.

360-Degree Photos

- Capture 360-degree photos using a tripod mounted at 5’-6’ AFF, utilizing a remote trigger to avoid self-portraits.
- Create a key for each 360-degree photo.
- Take at least one 360-degree photo in each surveyed area. 360 photos should not be taken further than 10’ from each photo location.
- 360-degree photos should not be resized and cannot replace standard array photos.
- Use the format (SITE #)-(SITE-NAME)-360 photos_###, e.g., 10899_001-University-Student-Center-360 Photos_001.