

# Preconstruction: Estimating

## The Estimate Approach

- Evaluate what materials are available
  - Is there a Soils Report?
  - Project Narrative/Synopsis – sometimes only written outline of what needs to be included
  - Preliminary Plans – typically architectural site plan; building floor plan; possibly elevations
  - Verify total project GSF; NSF (if applicable); total site acreage; desired # of units; etc.

# Preconstruction: Estimating

- What other resources exist? Use what you have to create what you do not!
  - Soils report for a project at nearby location? Probably similar conditions.
  - Google Earth – can be scaled and imported into Planswift to use as site plan
- Think about the region or municipality that you are in – familiarize yourself with atypical items

# Preconstruction: Estimating

- Site Visit (ABSOLUTE MUST DO!!!)
  - Review Existing Conditions – Structures, Pavements, Trees, Fences, etc.
  - Wet and Dry Utility Locations – look for possible tie-in locations; overhead obstructions, etc.
  - Grades and Existing Elevations in relation to adjacent streets, buildings, etc.
  - Review surrounding buildings for things that may be indicative of cost – does nearby landscaping seem extreme; are adjacent buildings flat roofs or pitched; is rooftop equipment screened; etc.

# Preconstruction: Estimating

- Discuss and review questions with Owner (and design team if available)
  - Review total SF, anticipated structural system, level of finishes anticipated, any special systems or equipment considerations, etc.
  - Ask questions well in advance of deadline (don't wait until day before to ask 50 questions) – be proactive

# Preconstruction: Estimating

## The Estimate Approach

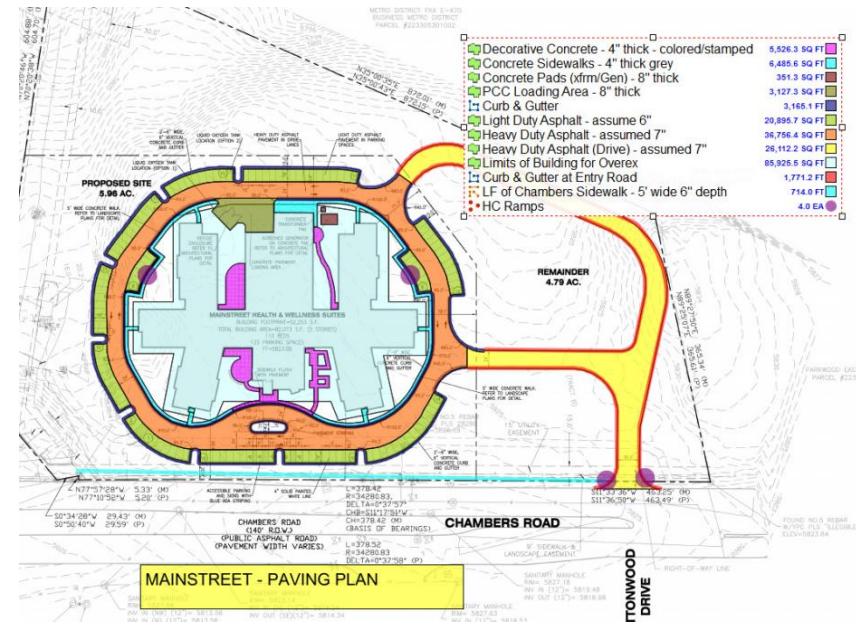
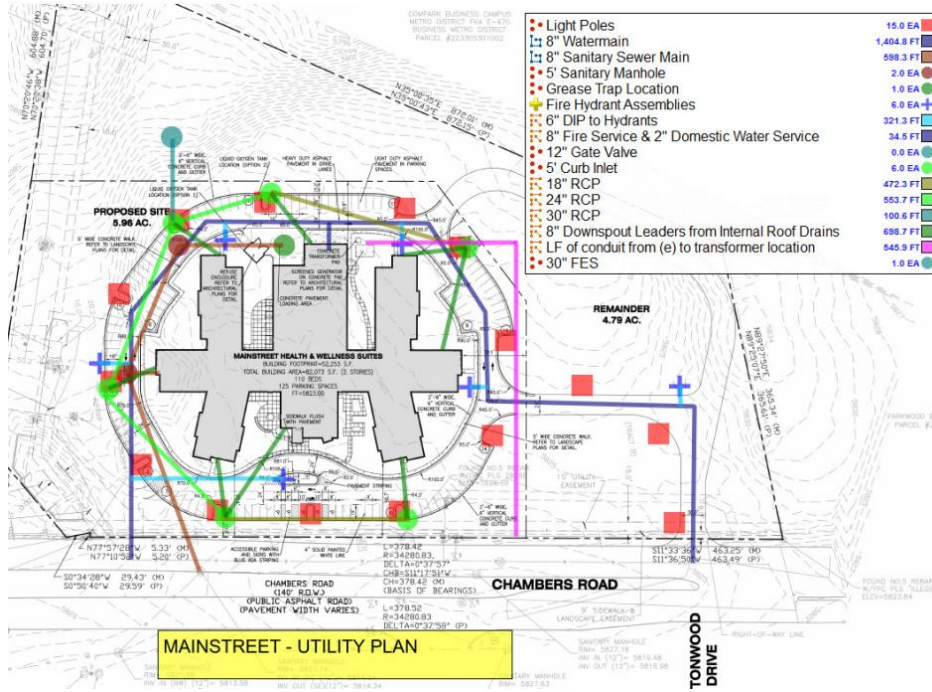
- Using Planswift to 'Create' plan documents
  - Use your knowledge to create what you typically have on a plans & specs project – pretend you are the civil engineer, architect, owner, interior designer
    - Preliminary site plan can be utilized to determine layouts for site utilities, paving plan, preliminary landscaping plan, etc.
    - Preliminary floor plan can be utilized to create foundation/slab plan, roof framing plan (steel), roof plan, finish plans, etc.
    - Use building perimeter to determine skin material quantities – use typical % from previous projects
    - REVIEW EXAMPLES

# Preconstruction: Estimating

## Completing quantity take off – PLANSWIFT (Usually by Project Engineer)

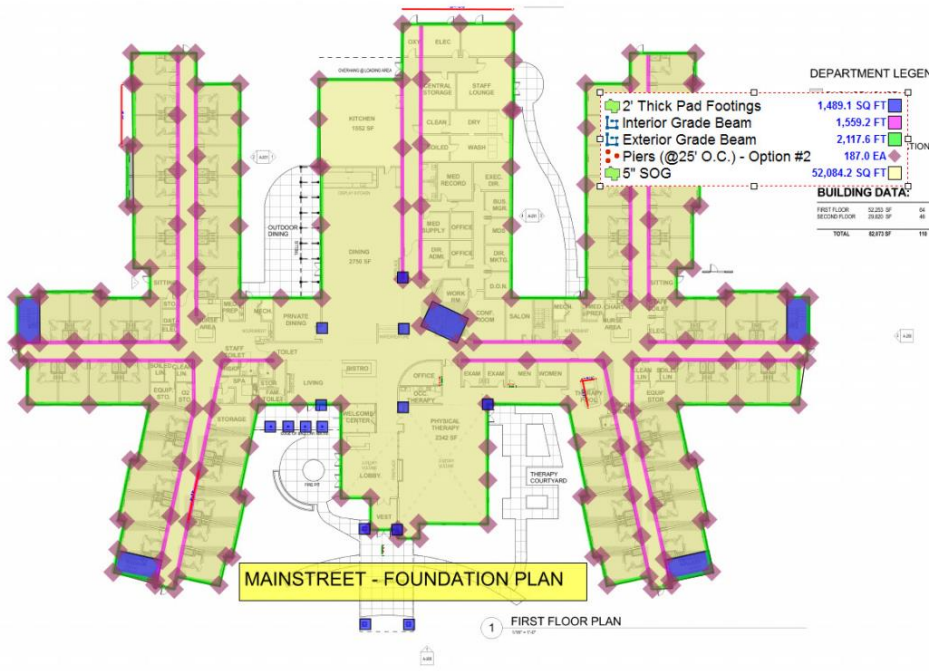
- Pull a previous estimate (both form & outline spec) that was similar to determine scopes of work, unit costs, etc. – schedule a meeting with your PE to identify and make a list of the items that need ‘Take-off’, assist them in identifying how to determine the quantity
- Teach PE’s to complete takeoff with as much detail as possible. Label all items in extreme detail so when exported to Excel the information is easier to use – i.e. “Perimeter Foundation – assumed size 2.5’x1’ with 8”x2’ Stemwall”
- Takeoff Sheets should be printed and placed in the P-File folder or inserted into the Estimate/Bid Book if you have one at the stage of the project.

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## Estimate Form

- Utilize the estimate form to its full potential
- Important to complete page #1 in its entirety and accurately – this assists you with cost/SF and other checking mechanisms throughout the estimate
- Typical project scopes of work are already outlined for you. **DO NOT DELETE LINE ITEMS ON CONCEPTUAL ESTIMATES**

# Preconstruction: Estimating

## The Estimate Assembly - Imputing takeoff quantities

- Simple conversions of takeoff to usable quantity – i.e. SF of asphalt to SY or LF of foundation to CY of concrete.
- Teach Project Engineers to do the MATH inside the cell – much easier to double check their work.

## Detailed Descriptions

- Add detail to explain the scope assumptions to the reviewer – i.e. what thickness is it; what material are you assuming; etc. This helps the reviewer with unit cost verification.

# Preconstruction: Estimating

## Imputing Unit Costs

- Pulling unit costs from bids & similar estimates – Compare the unit costs you are utilizing against similar unit costs; not only the material but the magnitude of the scope – i.e. the cost per SF for a 300,000 SF 60 MIL TPO roof is not comparable to a 10,000 SF 60 MIL TPO roof even though the assembly is exactly the same.
- Use good subs as a resource
  - Unit cost assistance for unfamiliar scopes – new product; specialty items; etc
  - Unit costs for out of market projects – things don't cost same in Chicago, IL vs. Wichita, KS

# Preconstruction: Estimating

- Track data entry for your reviewer – if you are not sure what it costs, highlight it. A good practice is to utilize color coding similar to bid tabs to keep track of which takeoff quantities and/or unit costs ‘NEED TO BE VERIFIED – TYPICALLY RED’

Item ID	Description	Quantity	Unit	Unit Cost	Total Cost	Notes	STATUS	REMARKS
02500	<b>Paving and Surfacing</b>		BID		0	232,891		Vess Excavating
\$45,011/Acre	Asphalt Paving Light Duty 3.5" + 6" in parking stalls	2,279	SY	28.50	64,942	Inc in 02200	-	Site Work
02520	Asphalt Paving Heavy Duty 4.5" + 6" in drive lanes	4,042	SY	36.50	147,521	Inc in 02200	-	Site Work
02523	Paving at maintenance drive		TON		0	Inc in 02200	-	Site Work
	Asphalt Repairs/Sawcutting before finish course	1	AL	10,000.00	10,000	15,000	-	Site Work
	Milling		SY		0		-	Site Work
	Geotextile or Fabric		SY		0		-	Site Work
02528	Stripe per C301 and C302; details C900	140	STALLS	150.00	21,000	Inc in 02200	-	Site Work
	Signage per C301 and C302; details C900	1	EST	5,000.00	5,000	Inc in 02200	-	Site Work

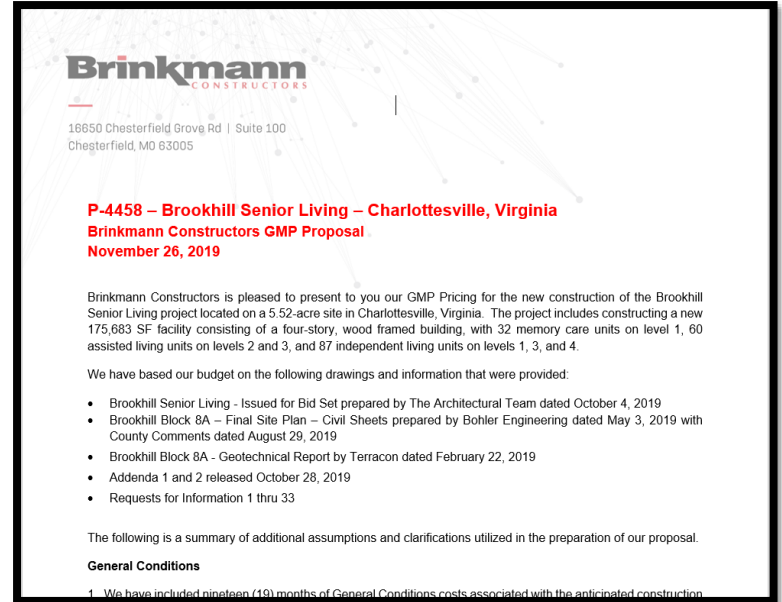
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## The Estimate Review:

- Review the estimate as a whole prior to reviewing it with anyone else – review each division to determine if all anticipated scope is covered – fill in the scope gaps – Compare the ‘big-picture’ cost per gross SF; cost per LF of perimeter; etc to similar projects in terms of product type and overall size.
- Think about things that dictate why a particular scope might not compare exactly to another – i.e. site coverage ratio is different OR the gross area to perimeter skin ratio is poor OR the gross SF per unit is vastly different
- Schedule and review the estimate internally

# Preconstruction: Estimating

- Often the first interaction or information we ever provide to a new potential client is a conceptual estimate – it needs to speak to our aptitude; be detailed; and be professional in appearance






# Preconstruction: Estimating

- Brinkmann's standard deliverable for a 'conceptual estimate'
  - Provide cover letter (preferred with new clients) or professional email explaining the provided information highlighting the big picture and major items that warrant brief explanation.
  - Clean version of Estimate Schedule of Values (Client Summary)
  - **EVERY** estimate must be accompanied by an outline specification
  - **EVERY** estimate must be accompanied by qualifications

# Preconstruction: Estimating

## Schedule of Values

- Ensure formatting & numbering is pristine
- Incorporate detail into the scope of work descriptions – helps client for quick understanding of scope – line item allowances.

					
P-4458 - Brookhill Senior Living - Charlottesville, VA		Schedule of Values *****			
CATEGORY	211 Bldg.	COST/REQ	COST/UNIT	COST/FSF	SUBTOTAL
1	GENERAL CONDITIONS	\$9,970	\$11,972	\$11.97	\$2,102,623
2	SPECIAL CONDITIONS	\$5,434	\$5,496	\$4.52	\$1,146,514
<b>GENERAL &amp; SPECIAL CONDITIONS SUBTOTAL:</b>		<b>\$15,404</b>	<b>\$18,158</b>	<b>\$18.58</b>	<b>\$3,259,299</b>
3	SITE DEMOLITION	\$0	\$0	\$0.00	\$0
4	EARTHWORK, GRADING & SHPPP	\$5,823	\$5,511	\$4.52	\$1,116,282
5	ASPHALT PAVING	\$1,178	\$13.18	\$1.41	\$241,463
6	ROADWAY IMPROVEMENTS	\$95	\$182	\$0.11	\$20,000
7	CONCRETE PAVING & CURBS	\$763	\$199	\$0.92	\$160,947
8	SANITARY SEWERS	\$283	\$451	\$0.46	\$10,710
9	WATERLINES	\$290	\$460	\$0.47	\$10,230
10	STORM SEWERS	\$1,437	\$1,930	\$0.97	\$245,319
11	STORM DETENTION & WATER QUALITY	\$0	\$0	\$0.00	\$0
12	DRY UTILITIES	\$320	\$377	\$0.38	\$67,468
13	SITE LIGHTING	\$1,959	\$1,037	\$1.87	\$228,900
14	SITE IMPROVEMENTS	\$2,422	\$2,155	\$2.91	\$511,000
15	IRRIGATION & LANDSCAPING	\$1,623	\$1,913	\$1.95	\$242,450
<b>SITE WORK SUBTOTAL:</b>		<b>\$15,892</b>	<b>\$18,733</b>	<b>\$19.89</b>	<b>\$3,353,185</b>
16	BUILDING DEMOLITION	\$0	\$0	\$0.00	\$0
17	DEEP FOUNDATIONS	\$0	\$0	\$0.00	\$0
18	FOUNDATIONS	\$1,987	\$2,243	\$2.39	\$419,211
19	FLATWORK	\$3,415	\$4,026	\$4.10	\$720,653
20	PRECAST & TILT-UP	\$0	\$0	\$0.00	\$0
21	MASONRY	\$2,430	\$2,144	\$2.92	\$512,650
22	STRUCTURAL STEEL	\$2,071	\$3,214	\$3.45	\$605,690
23	ROUGH CARPENTRY	\$16,560	\$19,520	\$19.89	\$2,494,093
24	FINISH CARPENTRY	\$3,141	\$10,245	\$10.44	\$1,632,309
25	INSULATION & FIRE PROOFING	\$3,357	\$3,457	\$4.03	\$701,239
26	EIFS, STUCCO, & SIDING	\$6,911	\$1,147	\$8.30	\$1,458,323
27	ROOFING	\$2,493	\$3,175	\$3.23	\$548,294
28	SHEET METAL	\$556	\$55	\$0.67	\$117,324
29	WATERPROOFING & SEALANTS	\$107	\$52	\$0.97	\$170,342
30	DOORS	\$4,701	\$5,342	\$5.65	\$919,194
31	GLASS & GLAZING	\$4,117	\$7,200	\$7.35	\$1,206,411
32	DRYWALL	\$10,128	\$11,940	\$12.17	\$2,131,318
33	ACOUSTICAL CEILING	\$581	\$614	\$0.70	\$122,502
34	FLOORING	\$4,764	\$5,416	\$5.72	\$1,005,254
35	PAINTING	\$3,282	\$3,168	\$3.94	\$692,444
36	MISC. SPECIALTIES & ACCESSORIES	\$2,640	\$2,993	\$3.05	\$535,936
37	EQUIPMENT	\$2,081	\$2,321	\$2.70	\$500,000
38	APPLIANCES & FURNISHINGS	\$2,400	\$2,000	\$4.00	\$712,425
39	SPECIAL CONSTRUCTION	\$124	\$93	\$1.00	\$175,000
40	ELEVATORS	\$2,995	\$3,331	\$3.60	\$632,000
41	FIRE PROTECTION	\$2,260	\$2,782	\$2.83	\$497,992
42	PLUMBING	\$10,112	\$12,745	\$12.99	\$2,241,421
43	HVAC	\$11,940	\$14,014	\$14.35	\$2,521,051
44	ELECTRICAL & LOW VOLTAGE	\$20,141	\$24,331	\$24.79	\$4,335,119
<b>BUILDING SUBTOTAL:</b>		<b>\$136,459</b>	<b>\$163,211</b>	<b>\$166.29</b>	<b>\$29,214,214</b>
45	CONTINGENCY, A.E.T.E.S. & TESTING	\$0	\$4,142	\$4.22	\$70,120
46	PERFORMANCE & PAYMENT BOND	\$0	\$0	\$0.00	\$0
47	GENERAL PROJECT INSURANCE	\$1,905	\$1,774	\$1.81	\$317,512
48	OVERHEAD & PROFIT	\$1,739	\$10,391	\$10.50	\$1,643,154
<b>MISC/GENERAL REQUIREMENTS SUBTOTAL:</b>		<b>\$13,757</b>	<b>\$16,216</b>	<b>\$16.52</b>	<b>\$2,942,726</b>
<b>TOTAL:</b>		<b>\$182,512.00</b>	<b>\$216,319.00</b>	<b>\$220.40 FSF</b>	<b>\$38,729,934</b>

# Preconstruction: Estimating

## Schedule of Values

- Provide list of possible value engineering savings
- Provide possible alternate/additive costs that we don't necessarily believe should be included in the base budget

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## Distribution to the Client

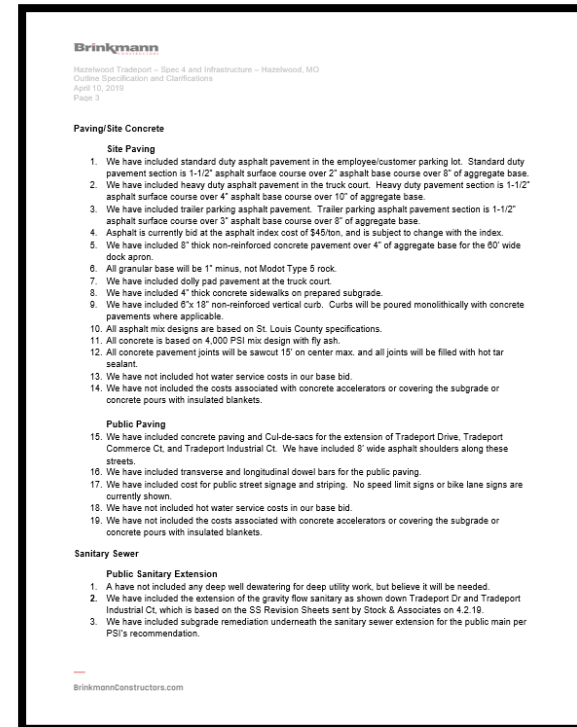
## Outline Specification Development

- Important document for us and the owner – clarifies the scope we have anticipated – may be used to identify scope for a tenant/lease agreement
- Highlight the big pictures – square footage; dimensions; building height; etc.
- List information provided that was utilized
- We have many outline specifications already prepared for nearly every market sector and project type – pull an old example or use as a template

# Preconstruction: Estimating

## Outline Specification Development

- Use as much detail as possible without too much info – you want them to read it, not be completely overloaded with information
- Detail inclusions that need to be clarified as allowances or specifically excluded from the scope of work
- Include takeoff exhibits if they will help clarify scope – in particular if we intend to go to a design/build model.



# Preconstruction: Estimating

## CLARIFICATIONS & EXCLUSIONS

- Should be included as the final section of the outline specification.
- If outline specification is not provided for some reason (i.e. we have more detailed drawings) – this document must still be included.
- See separate handout of Brinkmann's standard clarifications and exclusions page – can be easily modified.

